SonicWALL ViewPoint User's Guide

Version 2.8

Copyright Information

© 2004 SonicWALL, Inc. All rights reserved.

Under the copyright laws, this manual or the software described within, may not be copied, in whole or part, without the written consent of the manufacturer, except in the normal use of the software to make a backup copy. The same proprietary and copyright notices must be affixed to any permitted copies as were affixed to the original. Under the law, copying includes translating into another language or format.

SonicWALL is a registered trademark of SonicWALL, Inc.

Other product and company names mentioned herein may be trademarks and/or registered trademarks of their respective companies.

Specifications and descriptions subject to change without notice.

Part Number: 232-000572-00 Rev A

Software License Agreement for ViewPoint Management System

This Software License Agreement (SLA) is a legal agreement between you and SonicWALL, Inc. (SonicWALL) for the SonicWALL software product identified above, which includes computer software and any and all associated media, printed materials, and online or electronic documentation (SOFTWARE PRODUCT). By opening the sealed package(s), installing, or otherwise using the SOFTWARE PRODUCT, you agree to be bound by the terms of this SLA. If you do not agree to the terms of this SLA, do not open the sealed package(s), install or use the SOFTWARE PRODUCT. You may however return the unopened SOFTWARE PRODUCT to your place of purchase for a full refund.

The SOFTWARE PRODUCT is licensed, not sold.

You acknowledge and agree that all right, title, and interest in and to the SOFTWARE PRODUCT, including all associated intellectual property rights, are and shall remain with SonicWALL. This SLA does not convey to you an interest in or to the SOFTWARE PRODUCT, but only a limited right of use revocable in accordance with the terms of this SLA.

oThe SOFTWARE PRODUCT is licensed as a single product.

oYou may also store or install a copy of the SOFTWARE PRODUCT on a storage device, such as a network server, used only to install or run the SOFTWARE PRODUCT on your other computers over an internal network.

oYou may not resell, or otherwise transfer for value, rent, lease, or lend the SOFTWARE PRODUCT.

oThe SOFTWARE PRODUCT is trade secret or confidential information of SonicWALL or its licensors. You shall take appropriate action to protect the confidentiality of the SOFTWARE PRODUCT. You shall not reverse-engineer, de-compile, or disassemble the SOFTWARE PRODUCT, in whole or in part. The provisions of this section will survive the termination of this SLA.

oYou agree and certify that neither the SOFTWARE PRODUCT nor any other technical data received from SonicWALL, nor the direct product thereof, will be exported outside the United States except as permitted by the laws and regulations of the United States, which may require U.S. Government export approval/licensing. Failure to strictly comply with this provision shall automatically invalidate this License.

LICENSE

SonicWALL grants you a non-exclusive license to use the SOFTWARE PRODUCT for a number of SonicWALL Internet Security Appliances. This number is specified and shipped with the SOFTWARE PRODUCT. Support for additional SonicWALL Internet Security Appliances is subject to a separate upgrade license.

OEM - If the SOFTWARE PRODUCT is modified and enhanced for a SonicWALL OEM partner, you must adhere to the software license agreement of the SonicWALL OEM partner.

UPGRADES

If the SOFTWARE PRODUCT is labeled as an upgrade, you must be properly licensed to use a product identified by SonicWALL as being eligible for the upgrade in order to use the SOFTWARE PRODUCT. A SOFTWARE PRODUCT labeled as an upgrade replaces and/or supplements the product that formed the basis for your eligibility for the upgrade. You may use the resulting upgraded product only in accordance with the terms of this SLA. If the SOFTWARE PRODUCT is an upgrade of a component of a package of software programs that you licensed as a single product, the SOFTWARE PRODUCT may be used and transferred only as part of that single product package and may not be separated for use on more than one computer.

DISTRIBUTION RIGHTS

To i-net SPRINTAÔ 2000 DRIVER - SonicWALL has been given a non-exclusive, worldwide license by i-net software GmbH to distribute directly and indirectly (through SonicWALL's distribution channels) the i-net SPRINTAÔ 2000 driver to SonicWALL's end user customers to use the driver with SonicWALL ViewPoint. SonicWALL's end user customers may make a copy of the driver for backup or archival purposes only. SonicWALL's end user customers are not allowed to make other copies, transfer, re-distribute, use, translate, or reverse assemble/compile the driver with any other non-SonicWALL applications. i-net software GmbH holds copyright and title to the i-net SPRINTAÔ 2000 Driver.

To Microsoft's SQL Server Developer's Edition (MSDE) - This software incorporates Microsoft's SQL Server Developer's Edition (MSDE) and your use is subject to the terms and conditions of Microsoft's MSDE End-User License Agreement (a copy of which is available on Microsoft's website: <http://www.microsoft.com/sql/howtobuy/deveula.asp>).

To Quest Software's (formerly Sitraka) JClass ServerChart - This software incorporates Quest Software's (formerly Sitraka) JClass ServerChart and your use is subject to the terms and conditions of Quest's Jclass License Agreement (a copy of which is available on Quest's website: <http://java.quest.com/jclass/licensing.shtml>).

SUPPORT SERVICES

SonicWALL may provide you with support services related to the SOFTWARE PRODUCT (“Support Services”). Use of Support Services is governed by the SonicWALL policies and programs described in the user manual, in “online” documentation, and/or in other SonicWALL-provided materials. Any supplemental software code provided to you as part of the Support Services shall be considered part of the SOFTWARE PRODUCT and subject to terms and conditions of this SLA. With respect to technical information you provide to SonicWALL as part of the Support Services, SonicWALL may use such information for its business purposes, including for product support and development. SonicWALL shall not utilize such technical information in a form that identifies its source.

OWNERSHIP

As between the parties, SonicWALL retains all title to, ownership of, and all proprietary rights with respect to the SOFTWARE PRODUCT (including but not limited to any images, photographs, animations, video, audio, music, text, and 'applets” incorporated into the SOFTWARE PRODUCT), the accompanying printed materials, and any copies of the SOFTWARE PRODUCT. The SOFTWARE PRODUCT is protected by copyrights laws and international treaty provisions. The SOFTWARE PRODUCT is licensed, not sold. This SLA does not convey to you an interest in or to the SOFTWARE PRODUCT, but only a limited right of use revocable in accordance with the terms of this SLA.

U.S. GOVERNMENT RESTRICTED RIGHTS

If you are acquiring the Software including accompanying documentation on behalf of the U.S. Government, the following provisions apply. If the Software is supplied to the Department of Defense (“DoD”), the Software is subject to “Restricted Rights”, as that term is defined in the DOD Supplement to the Federal Acquisition Regulations (“DFAR”) in paragraph 252.227 7013(c) (1). If the Software is supplied to any unit or agency of the United States Government other than DOD, the Government's rights in the Software will be as defined in paragraph 52.227 19(c) (2) of the Federal Acquisition Regulations (“FAR”). Use, duplication, reproduction or disclosure by the Government is subject to such restrictions or successor provisions. Contractor/Manufacturer is: SonicWALL, Inc. 1160 Bordeaux Drive, Sunnyvale, California 94089.

MISCELLANEOUS

This SLA represents the entire agreement concerning the subject matter hereof between the parties and supersedes all prior agreements and representations between them. It may be amended only in writing executed by both parties. This SLA shall be governed by and construed under the laws of the State of California as if entirely performed within the State and without regard for conflicts of laws. Should any term of this SLA be declared void or unenforceable by any court of competent jurisdiction, such declaration shall have no effect on the remaining terms hereof. The failure of either party to enforce any rights granted hereunder or to take action against the other party in the event of any breach hereunder shall not be deemed a waiver by that party as to subsequent enforcement of rights or subsequent actions in the event of future breaches.

TERMINATION

This SLA is effective upon your opening of the sealed package(s), installing or otherwise using the SOFTWARE PRODUCT, and shall continue until terminated. Without prejudice to any other rights, SonicWALL may terminate this SLA if you fail to comply with the terms and conditions of this SLA. In such event, you agree to return or destroy the SOFTWARE PRODUCT (including all related documents and components items as defined above) and any and all copies of same.

LIMITED WARRANTY

SonicWALL warrants that a) the software product will perform substantially in accordance with the accompanying written materials for a period of ninety (90) days from the date of purchase, and b) any support services provided by SonicWALL shall be substantially as described in applicable written materials provided to you by SonicWALL. Any implied warranties on the software product are limited to ninety (90) days. Some states and jurisdictions do not allow limitations on duration of an implied warranty, so the above limitation may not apply to you.

CUSTOMER REMEDIES

SonicWALL's and its suppliers' entire liability and your exclusive remedy shall be, at SonicWALL's option, either a) return of the price paid, or b) repair or replacement of the SOFTWARE PRODUCT that does not meet SonicWALL's Limited Warranty and which is returned to SonicWALL with a copy of your receipt. This Limited Warranty is void if failure of the SOFTWARE PRODUCT has resulted from accident, abuse, or misapplication. Any replacement SOFTWARE PRODUCT shall be warranted for the remainder of the original warranty period or thirty (30) days, whichever is longer. Outside of the United States, neither these remedies nor any product Support Services offered by SonicWALL are available without proof of purchase from an authorized SonicWALL international reseller or distributor.

NO OTHER WARRANTIES

To the maximum extent permitted by applicable law, SonicWALL and its suppliers/licensors disclaim all other warranties and conditions, either express or implied, including, but not limited to, implied warranties of merchantability, fitness for a particular purpose, title, and non-infringement, with regard to the SOFTWARE PRODUCT, and the provision of or failure to provide support services. This limited warranty gives you specific legal rights. You may have others, which vary from state/jurisdiction to state/jurisdiction.

LIMITATION OF LIABILITY

Except for the warranties provided hereunder, to the maximum extent permitted by applicable law, in no event shall SonicWALL or its suppliers/licensors be liable for any special, incidental, indirect, or consequential damages for lost business profits, business interruption, loss of business information,) arising out of the use of or inability to use the SOFTWARE PRODUCT or the provision of or failure to provide support services, even if SonicWALL has been advised of the possibility of such damages. In any case, SonicWALL's entire liability under any provision of this SLA shall be limited to the amount actually paid by you for the SOFTWARE PRODUCT; provided, however, if you have entered into a SonicWALL support services agreement, SonicWALL's entire liability regarding support services shall be governed by the terms of that agreement. Because some states and jurisdiction do not allow the exclusion or limitation of liability, the above limitation may not apply to you.

Manufacturer is SonicWALL, Inc. with headquarters located at 1143 Borregas Avenue, Sunnyvale, CA 94089, USA.

Chapter 1 Introducing SonicWALL ViewPoint **11**

Chapter 2 Installing SonicWALL ViewPoint **13**
Installation Overview **14**
Installation **15**
Logging in and out of SonicWALL ViewPoint **17**
Registering SonicWALL ViewPoint **18**
Creating a mysonicwall.com Account **18**
Registering the SonicWALL Appliance **18**
Activating the ViewPoint Software **18**
Enabling the ViewPoint License on the SonicWALL Appliance **19**

Chapter 3 Configuring ViewPoint **21**
Configuring a SonicWALL Appliance for SonicWALL ViewPoint **22**
Configuring Access to a SonicWALL Appliance **23**
Adding a SonicWALL Appliance to SonicWALL ViewPoint **26**
Deleting SonicWALL Appliances from SonicWALL ViewPoint **27**
Modifying Settings for a SonicWALL Appliance **28**
Configuring User Settings **29**
Changing ViewPoint Login Password **29**
Configuring Presentation Options **29**
Configuring Management Settings **31**
Configuring General ViewPoint Settings **31**
Configuring Alert Settings **31**
Managing ViewPoint Sessions **32**
Configuring Email/Alert Setting Notifications **33**
Configuring Reporting Settings **35**
Configuring Log Viewer Settings **35**
General Report Settings **35**
Adding a Service **36**
Configuring Email/Archive Settings **37**

Chapter 4 Viewing Reports **39**
Viewing Status Reports **39**
Viewing the Status Summary Report **39**
Viewing Status Over Time **41**
Viewing Bandwidth Reports **42**
Viewing the Bandwidth Summary Report **42**
Monitoring Bandwidth Usage in Real Time **44**
Viewing the Top Users of Bandwidth **44**
Viewing Bandwidth Usage Over Time **46**
Viewing the Top Users of Bandwidth Over Time **48**
Viewing Service Usage Reports **50**
Monitoring Service Usage in Real Time **50**
Viewing the Services Summary Report **51**

Adding a Service 52
Viewing Web Usage Reports 54
Viewing the Web Usage Summary Report 54
Viewing the Top Web Sites 56
Viewing the Top Users of Web Bandwidth 57
Viewing Web Usage by User 59
Viewing Web Usage by Site 61
Viewing Web Usage Over Time 62
Viewing Top Sites Over Time 64
Viewing Top Users Over Time 65
Viewing Bandwidth Usage By User Over Time 67
Viewing Web Filter Reports 69
Viewing the Web Filter Summary Report 69
Viewing the Web Filter Top Sites Report 71
Viewing the Top Users that Try to Access Blocked Sites 72
Viewing the Top Blocked Sites for Each User 74
Viewing Blocked Site Attempts Over Time 75
Viewing the Top Blocked Site Attempts Over Time 77
Viewing the Top Blocked Site Users Over Time 78
Viewing the Top Blocked Sites for Each User Over Time 80
Viewing File Transfer Protocol Reports 82
Viewing the FTP Summary Report 82
Viewing the Top Users of FTP Bandwidth 83
Viewing FTP Bandwidth Usage Over Time 85
Viewing the Top Users of FTP Bandwidth Over Time 87
Viewing Mail Usage Reports 89
Viewing the Mail Usage Summary Report 89
Viewing the Top Users of Mail Bandwidth 91
Viewing Mail Usage Over Time 92
Viewing the Top Users of Mail Bandwidth Over Time 94
Viewing VPN Usage Reports 96
Viewing the VPN Usage Summary Report 96
Viewing the Top VPN Users 98
Viewing VPN Usage Over Time 99
Viewing the Top VPN Users Over Time 101
Viewing VPN Usage by Policy 102
Viewing the Top VPN Policies Over Time 104
Viewing Hourly VPN Usage by Policy 105
Viewing the VPN Services Summary Report 107
Viewing Attack Reports 109
Viewing the Attack Summary Report 109
Viewing the Attacks by Category 110
Viewing the Attacks by Source 112
Viewing the Errors and Exceptions Report 113
Viewing Attack Reports Over Time 115
Viewing the Attacks by Category Over Time 116
Sources Over Time 118
Viewing Errors Over Time 119
Viewing Intrusion Prevention Reports 122
Viewing the Intrusion Prevention Summary Report 122
Viewing the Intrusions by Destination 123
Viewing the Intrusions by Source 125

Top Intrusions 126
Top Intrusions by Priority 128
Viewing Intrusions Over Time 129
Viewing Intrusions by Destination Over Time 131
Sources Over Time 132
Top Intrusions Over Time 134
Viewing Authentication Reports 136
Viewing the User Login Report 136
Viewing the Administrator Login Report 137
Viewing the Failed Login Report 139
Viewing the Log 141
Viewing the Log for a SonicWALL Appliance 141

Chapter 5 Scheduling SonicWALL ViewPoint 143
Scheduling a Daily Report 144
Scheduling a Weekly or Monthly Report 146
Uninstalling the ViewPoint Web Server from the DOS Prompt 149
Changing the ViewPoint Web Server Port Number 149
Changing the SonicWALL ViewPoint IP Address 149
Changing the Default Syslog Server Port Number 149
The sgmsConfig.xml File 150
The SonicWALL ViewPoint Log Files 150
Encrypting the sgmsConfig.xml File 151
Encrypted Data in the sgmsConfig.xml File 151
Resetting the Admin Password 151
Copying/Pasting into SonicWALL ViewPoint User Interface 151
Using the Import Feature from Applet 152
Securing Access to the ViewPoint Web Server 152
Creating a Keystore with a Valid Test Certificate 152
Creating a Secure Website 152
Securely Accessing SonicWALL ViewPoint 153
Customizing Reports 155
Report File Elements 157

Introducing SonicWALL ViewPoint

SonicWALL ViewPoint is a browser-based software application that creates dynamic web-based network reports. With SonicWALL ViewPoint, you can monitor network access, enhance security, and anticipate future bandwidth needs.

SonicWALL ViewPoint generates both real-time and historical reports to offer a complete view of all activity through one or more SonicWALL appliances. It generates the reports based on the stream of syslog data received from each SonicWALL appliance and summarizes this data, allowing you to view the reports for current date, a previous day, or for a range of days.

SonicWALL ViewPoint:

- Displays bandwidth use by IP address and service.
- Identifies inappropriate Internet use.
- Provides detailed reports of attacks.
- Collects and aggregates system and network errors.
- Shows Virtual Private Network (VPN) events and problems.
- Presents visitor traffic to your website.
- Provides detailed daily firewall logs to analyze specific events.

SonicWALL ViewPoint offers the following features:

- **Web-based browser reporting application**—SonicWALL ViewPoint can be accessed from a local or remote system using a web browser.
- **Single firewall real-time and historical reports**—SonicWALL ViewPoint offers reports for single SonicWALL appliances.
- **Aggregated real-time and historical reports**—SonicWALL ViewPoint offers aggregated reports for multiple SonicWALL appliances.
- **Summarized Reports**—SonicWALL ViewPoint summarizes its data, allowing the user to view reports for the current date, a previous day, or a range of days.
- **Support for multiple firewalls**—SonicWALL ViewPoint can generate reports for one or more SonicWALL appliances.
- **Log Viewer**—SonicWALL ViewPoint includes the Log Viewer to search the database for a specific firewall activity type.
- **Top Usage Reports**—SonicWALL ViewPoint includes a large range of reports that display the top sites, top users, and top sites per user.
- **Concurrent login sessions**—Multiple users and administrators can log into SonicWALL ViewPoint concurrently.
- **Syslog reporting**—SonicWALL ViewPoint generates reports based on the stream of syslog data received from each SonicWALL appliance.
- **Embedded MSDE database**—SonicWALL ViewPoint installs MSDE database to store raw and summarized syslog traffic from each SonicWALL appliance.
- **Supports Windows 2000 Professional and Windows XP Professional** —SonicWALL ViewPoint software can be installed on a Windows server that is located on the SonicWALL appliance's LAN or WAN network.
- **Supports most SonicWALL Internet Security Appliances**—SonicWALL ViewPoint supports 2nd and 3rd generation SonicWALL appliances, including the new SonicWALL Wireless product.
- **SonicWALL firmware**—SonicWALL ViewPoint supports SonicWALL appliances running firmware 6.3.1.4 and above and SonicWALL Wireless product running SonicOS 1.0 and above.

Installing SonicWALL ViewPoint

This chapter describes how to install or upgrade SonicWALL ViewPoint.

To install SonicWALL ViewPoint, complete the following procedures:

- Review the installation requirements. See “Installation Overview” on page 14.
- Install SonicWALL ViewPoint, see “Installation” on page 15.
- Register SonicWALL ViewPoint, see “Installation” on page 15.

Installation Overview

In order to install and run SonicWALL ViewPoint, you must be logged in as the administrator and the SonicWALL ViewPoint server must meet the following requirements:

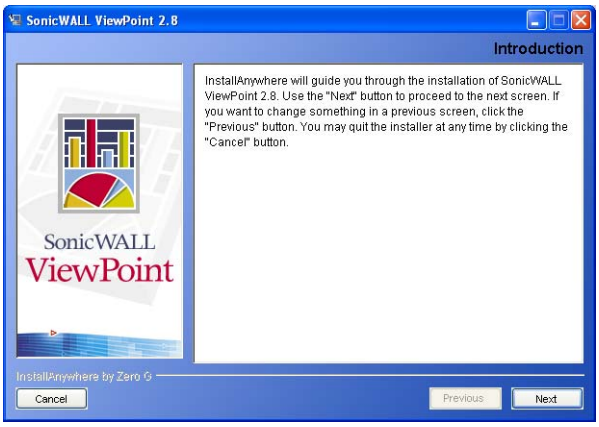
- Windows 2000 or Windows XP Professional.
- If accessed from the WAN interface, the SonicWALL appliance must have a static IP address. Otherwise, it may have either a static or dynamic IP address.
- Local and remote browser access: Microsoft Internet Explorer 6.x.
- 750 MHz or faster processor.
- Minimum 512 MB RAM.
- At least 85 MB of free disk space.

Installation

When you are ready to install SonicWALL ViewPoint, follow these steps:

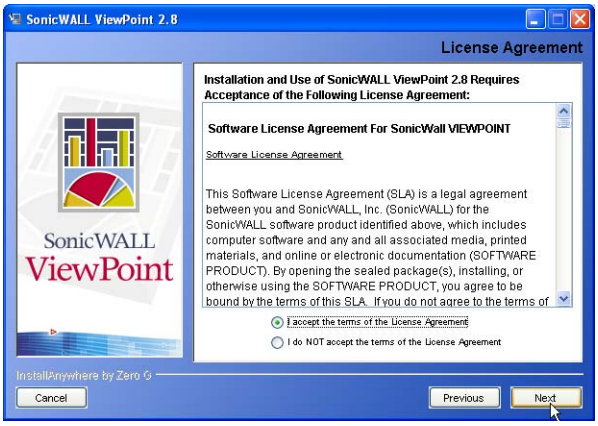
1. Log on to the computer as administrator.
2. Insert the SonicWALL ViewPoint CD-ROM or locate the SonicWALL ViewPoint install file on the network. Double-click the setup.exe. The Introduction screen appears (Figure 1).

Figure 1: Introduction Screen


SonicWALL ViewPoint 2.8
Introduction
InstallAnywhere will guide you through the installation of SonicWALL ViewPoint 2.8. Use the "Next" button to proceed to the next screen. If you want to change something in a previous screen, click the "Previous" button. You may quit the installer at any time by clicking the "Cancel" button.
SonicWALL
ViewPoint
InstallAnywhere by Zero G
Cancel
Previous
Next

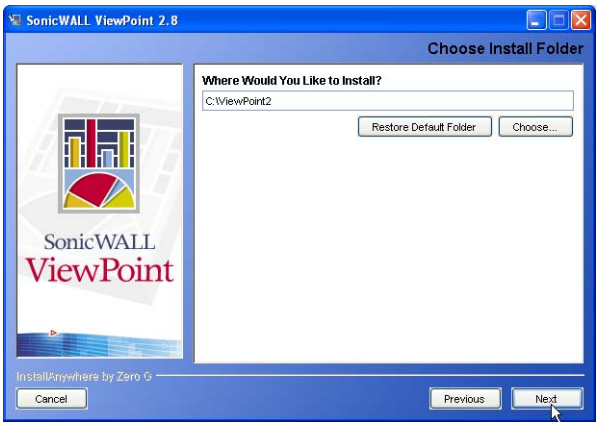
3. Click **Next**. The License Agreement screen appears (Figure 2).

Figure 2: License Agreement Screen


SonicWALL ViewPoint 2.8
License Agreement
Installation and Use of SonicWALL ViewPoint 2.8 Requires Acceptance of the Following License Agreement:
Software License Agreement For SonicWall VIEWPOINT
Software License Agreement
This Software License Agreement (SLA) is a legal agreement between you and SonicWALL, Inc. (SonicWALL) for the SonicWALL software product identified above, which includes computer software and any and all associated media, printed materials, and online or electronic documentation (SOFTWARE PRODUCT). By opening the sealed package(s), installing, or otherwise using the SOFTWARE PRODUCT, you agree to be bound by the terms of this SLA. If you do not agree to the terms of
I accept the terms of the License Agreement
I do NOT accept the terms of the License Agreement
SonicWALL
ViewPoint
InstallAnywhere by Zero G
Cancel
Previous
Next

4. Select from the following:
   - To accept the terms of the license agreement, select **I accept the terms of the License Agreement** and click **Next**. The Choose Install Folder screen appears (Figure 3).
   - To not accept the terms, select **I do NOT accept the terms of the License Agreement** and click **Next**. The SonicWALL ViewPoint installation program closes and the product will not install.

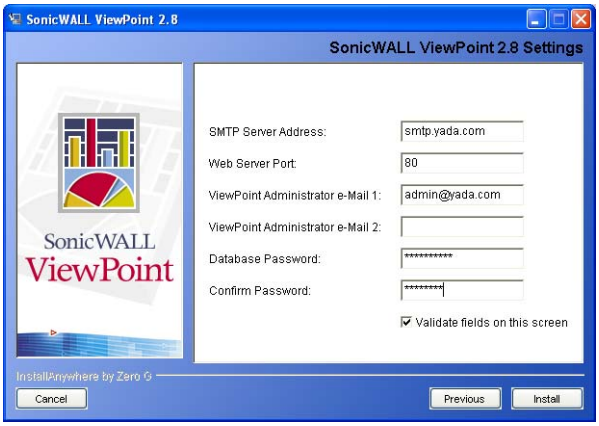
Figure 3: Choose Install Folder Screen



5. To accept the default location, click **Next**. To select a different location, click **Choose** and select a folder. Click **Next**.

   The Settings screen appears (Figure 4).

Figure 4: Settings Screen



Do the following:

- Enter the IP address or host name of the Simple Mail Transfer Protocol (SMTP) server in the **SMTP Server Address** field.
- Enter the number of the web server port in the **Web Server Port** field (default: 80).
- Enter the e-mail addresses of administrators who will receive e-mail notifications from SonicWALL ViewPoint.
- Enter and confirm the database password in the **Database Password** and **Confirm Password** fields.
- To configure SonicWALL ViewPoint to validate these settings, select the **Validate fields on this screen** check box.

Click **Install**. The installation program begins copying SonicWALL ViewPoint files.

6. After the files are copied, restart the server. Installation is complete.

Logging in and out of SonicWALL ViewPoint

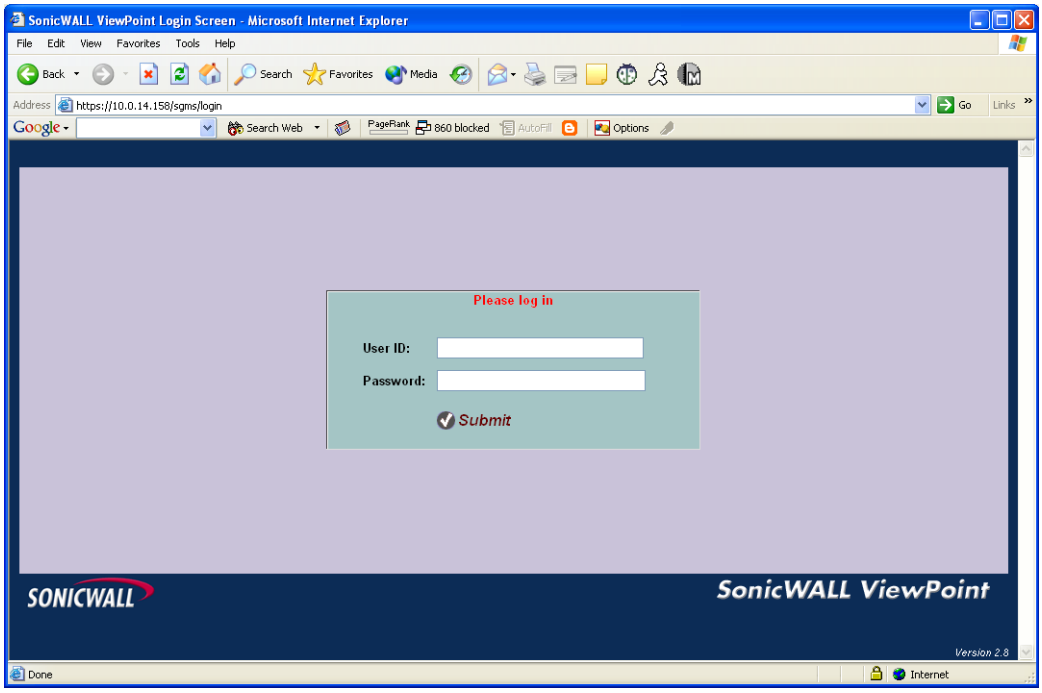
To start and log into SonicWALL ViewPoint, follow these steps:

1. Do one of the following:

- If you are logging in locally, double-click the SonicWALL ViewPoint icon on your desktop.
- If you are logging in from a remote location, open a web browser and enter http://viewpoint_ipaddress/sgms/login or http://viewpoint_ipaddress or http://localhost .

The SonicWALL ViewPoint login page appears.

Figure 5: SonicWALL ViewPoint Login Page



2. Enter the SonicWALL ViewPoint user ID (default: admin) and password (default: password).

Note: *After the password is entered, an authenticated management session is established that times out after 5 minutes of inactivity. The default time-out can be changed from the General/ViewPoint Password page on the Console Panel.*

For the security purposes, it is highly recommended to change the default password for the user admin. The maximum size of the SonicWALL ViewPoint User ID is 24 alphanumeric characters. If the password is more than 32 characters long, it will automatically be truncated.

3. Click **Submit**. The SonicWALL ViewPoint UI opens.
4. To logout, click the **Logout** button in the SonicWALL ViewPoint UI.

Registering SonicWALL ViewPoint

To register SonicWALL ViewPoint, follow these steps:

- Create a mysonicwall.com account—see “Creating a mysonicwall.com Account” on page 18.
- Register the SonicWALL appliance—see “Registering the SonicWALL Appliance” on page 18.
- Activate the ViewPoint Software—see “Activating the ViewPoint Software” on page 18.
- Enable the ViewPoint license on the SonicWALL appliance—see “Enabling the ViewPoint License on the SonicWALL Appliance” on page 19.

Creating a mysonicwall.com Account

If you do not already have a mysonicwall.com account, open a web browser and navigate to the following website:

`http://www.mysonicwall.com`

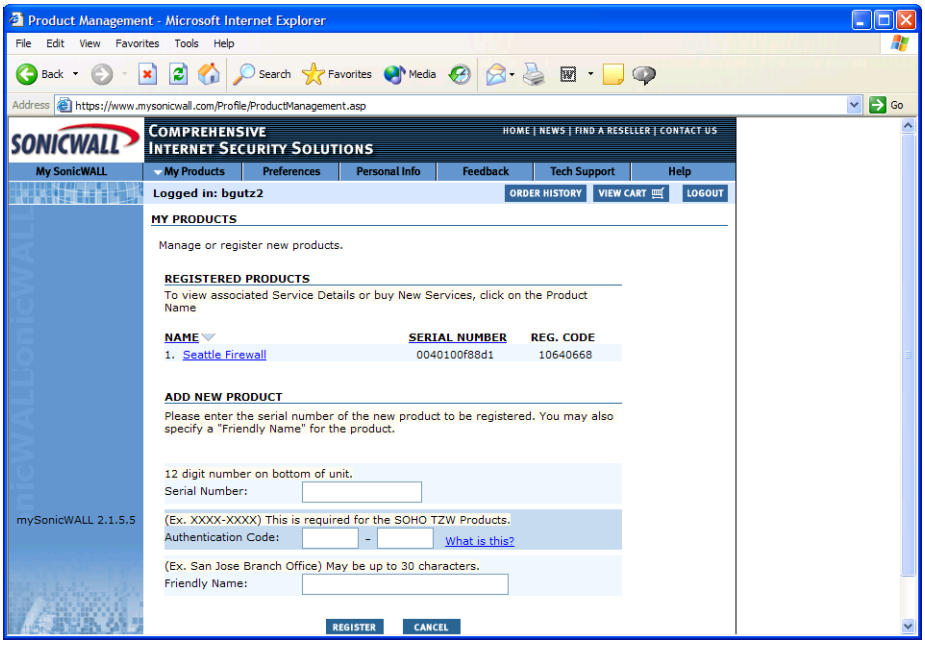
Then, follow the on-screen prompts to create a user account.

Registering the SonicWALL Appliance

To register the SonicWALL appliance, follow these steps:

1. Log on to mysonicwall.com.
2. Click **My Products**. The **SonicWALL Product Registration** page appears.

Figure 6: mysonicwall.com Welcome Page



3. Enter your SonicWALL serial number in the **Serial Number** field.
4. If you are registering a SonicWALL SOHO TZW, enter the authentication code in the **Authentication Code** field.
5. Enter a descriptive name for the SonicWALL appliance in the **Friendly Name** field.
6. Click **Register**. The mysonicwall.com website registers the SonicWALL appliance.

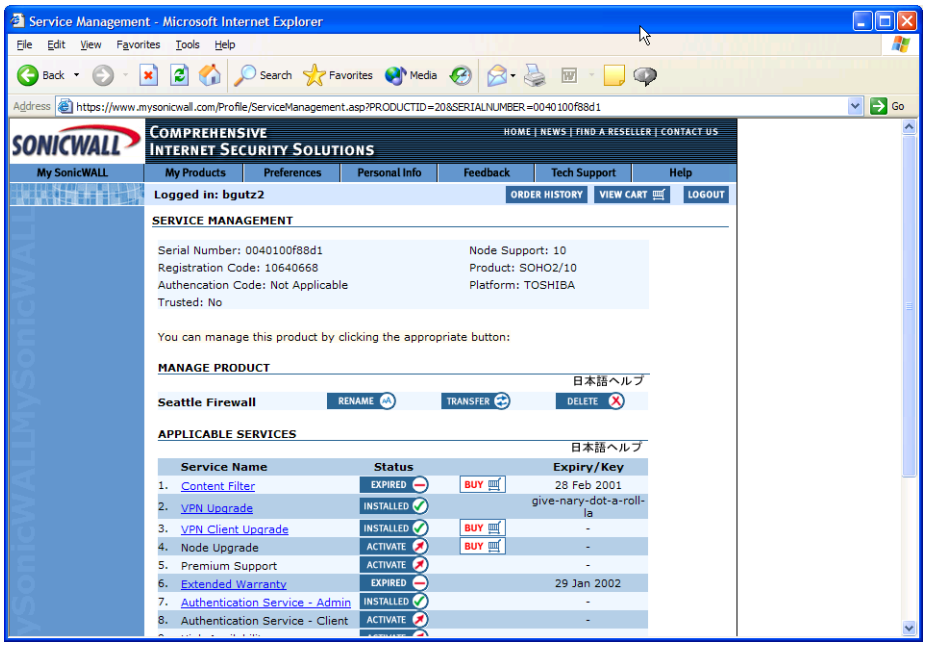
Activating the ViewPoint Software

To activate the SonicWALL ViewPoint software, follow these steps:

1. Log on to mysonicwall.com.

2. Click the label of the newly registered SonicWALL appliance. The **Service Management** page appears.

Figure 7: Service Management Page



3. Locate the ViewPoint service and click its **Activate** button. The Activate Service dialog box appears.
4. Enter the ViewPoint Activation Key in the **Activation Key** field. The ViewPoint Activation Key is printed on the ViewPoint Software License Certificate shipped with the ViewPoint package.
5. Click **Submit**. After the Activation Key is registered, a ViewPoint License Key will appear. Carefully write down the ViewPoint License Key in a safe place.

Enabling the ViewPoint License on the SonicWALL Appliance

To enable the SonicWALL ViewPoint license, follow these steps:

1. Log into the SonicWALL appliance.
2. Expand the **Log** tree and click **ViewPoint**. The **ViewPoint** page appears.
3. Enter the ViewPoint License Key provided by mysonicwall.com in the **Enter Upgrade Key** field.
4. Click **Apply**.
5. Restart the SonicWALL for the change to take effect.

Configuring ViewPoint

This chapter describes configure SonicWALL ViewPoint. Select from the following:

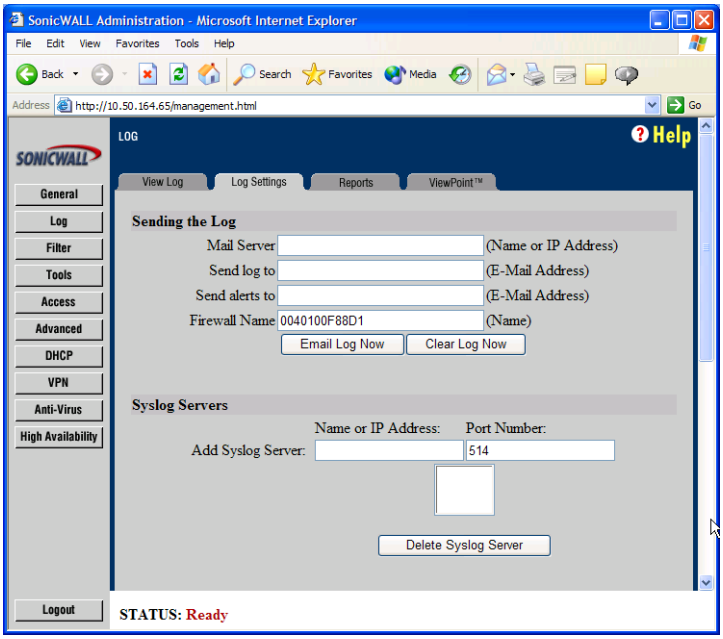
- To configure a SonicWALL appliance for SonicWALL ViewPoint, see “Configuring a SonicWALL Appliance for SonicWALL ViewPoint” on page 22.
- To configure access settings, see “Configuring Access to a SonicWALL Appliance” on page 23.
- To add a SonicWALL appliance to SonicWALL ViewPoint, see “Adding a SonicWALL Appliance to SonicWALL ViewPoint” on page 26.
- To delete a SonicWALL appliance from SonicWALL ViewPoint, see “Deleting SonicWALL Appliances from SonicWALL ViewPoint” on page 27.
- To modify a SonicWALL appliance’s settings, see “Modifying Settings for a SonicWALL Appliance” on page 28.
- To change the SonicWALL ViewPoint password, see “Changing ViewPoint Login Password” on page 29.
- To configure ViewPoint settings, see “Configuring General ViewPoint Settings” on page 31.
- To manage ViewPoint sessions, see “Managing ViewPoint Sessions” on page 32.
- To configure reporting settings, see “Configuring Reporting Settings” on page 35.

Configuring a SonicWALL Appliance for SonicWALL ViewPoint

The following instructions describe how to configure a SonicWALL appliance to send data to SonicWALL ViewPoint.

1. Log into the SonicWALL appliance.
2. Expand the **Log** tree and click **Log Settings**. The Log Settings page appears (Figure 8).

Figure 8: Log Settings Page



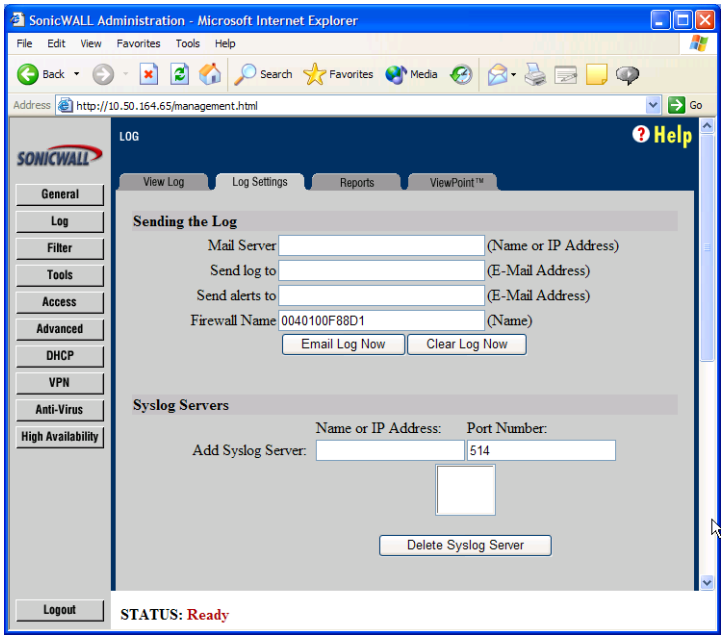
3. Enter the IP address and port (default: 514) of the SonicWALL ViewPoint server in the **Add Syslog Server** fields.
4. Enter 0 in the **Syslog Individual Event Rate** field.

   The Syslog Individual Event Rate field reduces the number of repetitive events that are logged by SonicWALL ViewPoint. Although this prevents a log file from being full of repetitive events, setting the Syslog Individual Event Rate field to anything other than 0 will result in inaccurate ViewPoint reports.
5. Select **Default** from the **Syslog Format** list box.
6. To ensure accurate and complete reporting, make sure that every event category in the **Categories** area is selected except for **Network Debug**.
7. When you are finished, click **Update**.

If the SonicWALL appliance is running SonicOS, follow these steps:

1. Log into the SonicWALL appliance.
2. Expand the **Log** tree and click **Automation**. The Automation page appears (Figure 9).

Figure 9: Automation Page



3. Enter 0 in the **Syslog Individual Event Rate** field.

   The Syslog Individual Event Rate field reduces the number of repetitive events that are logged by SonicWALL ViewPoint. Although this prevents a log file from being full of repetitive events, setting the Syslog Individual Event Rate field to anything other than 0 will result in inaccurate ViewPoint reports.

4. Select **Default** from the **Syslog Format** list box.
5. Click **Add** in the **Server Name** section and enter the IP address and port (default: 514) of the SonicWALL ViewPoint server in the **Add Syslog Server** fields. Then, click **OK**.
6. To ensure accurate and complete reporting, click **Categories** and make sure that every event category in the **Categories** area is selected except for **Network Debug**. Then, click **Apply**.
7. When you are finished, click **Apply**.

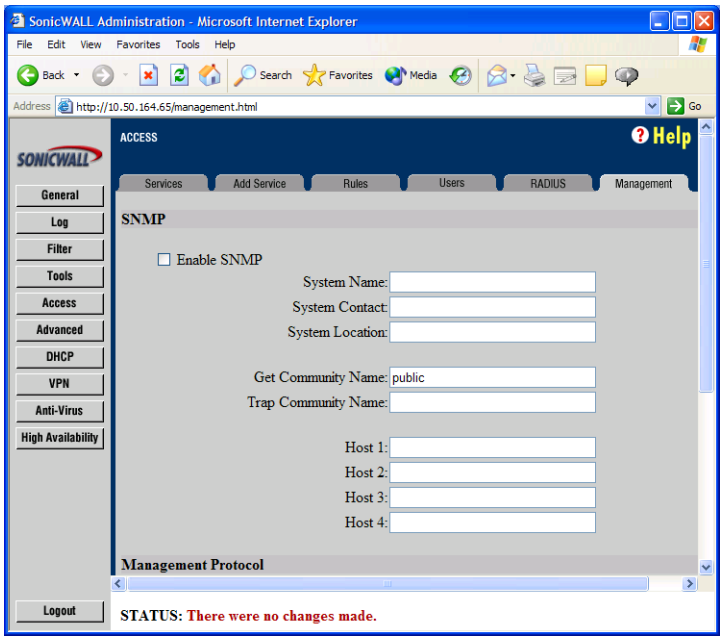
Configuring Access to a SonicWALL Appliance

In order to use SonicWall ViewPoint, the SonicWALL appliance must be configured to communicate with SonicWALL ViewPoint and the appliance must be added to the SonicWALL ViewPoint UI.

SonicWALL ViewPoint can access the appliance through the LAN or WAN interface. If the access will occur through the LAN interface, SonicWALL ViewPoint can log into the SonicWALL appliance using HTTP or HTTPS, which are enabled by default. If the access will occur through the WAN interface, the SonicWALL appliance must be configured to allow remote access. To configure remote access through the WAN interface, follow these steps:

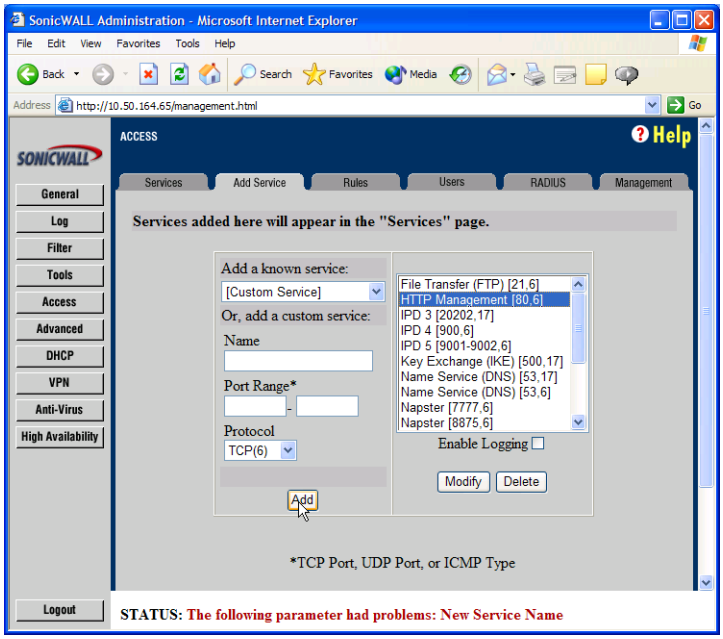
1. Log into the SonicWALL.
2. Expand the **Access** tree, and click **Management**. The Management page appears (Figure 10).

Figure 10: Management Page



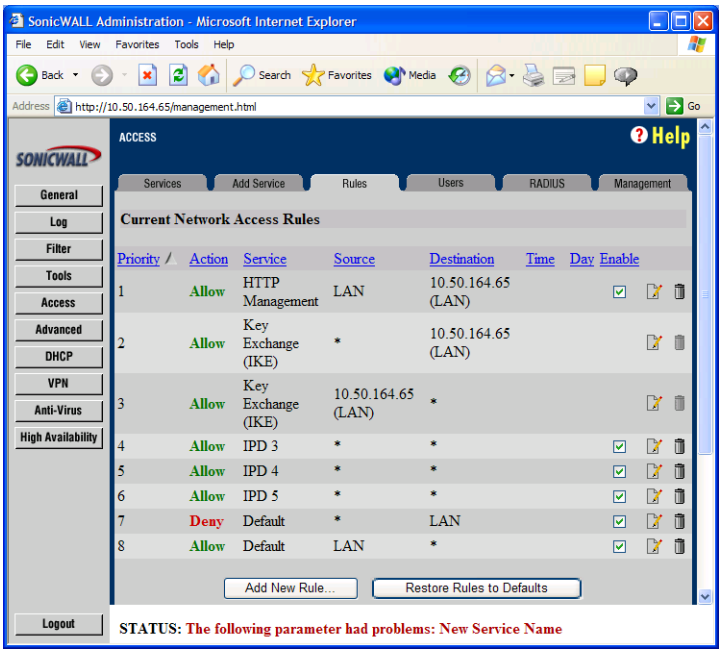
3. From the Management Method section, select from the LAN interface and remotely from the WAN interface from the **Managed** pull-down menu.
4. Click **Update**.
5. Click the **Add Service** tab. The Add Service page appears (Figure 11).

Figure 11: Add Service Page



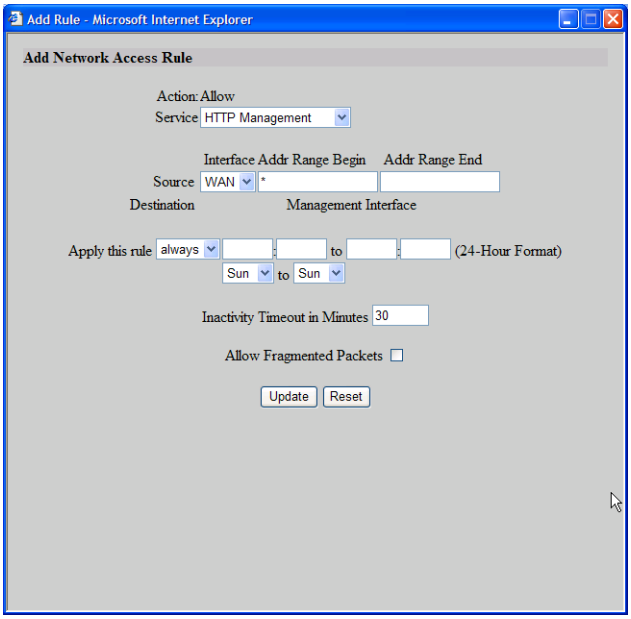
6. Select **HTTPS Management** from the **Add a Known service** list and click **Add**.
7. Click the **Rules** tab. The Rules page appears (Figure 12).

Figure 12: Rules Page



8. Click **Add New Rule**. The **Add Network Access Rule** dialog box appears (Figure 13).

Figure 13: Add Network Access Rule Dialog Box


Add Rule - Microsoft Internet Explorer
Add Network Access Rule
Action: Allow
Service HTTP Management
Interface Addr Range Begin Addr Range End
Source WAN *
Destination Management Interface
Apply this rule always to (24-Hour Format)
Sun to Sun
Inactivity Timeout in Minutes 30
Allow Fragmented Packets
Update Reset

9. Create a rule that allows SonicWALL ViewPoint to access your SonicWALL appliance using HTTPS (HTTPS Management service) from the WAN and click **Update**. The rule is added.

Note: *If your SonicWALL ViewPoint server is behind a firewall, you need to ensure the syslog traffic can reach the SonicWALL ViewPoint server. To do this, add the IP address of the firewall as the syslog server in your SonicWALL appliance, and provide a rule in the firewall to allow syslog traffic from your SonicWALL appliance to the SonicWALL ViewPoint server.*

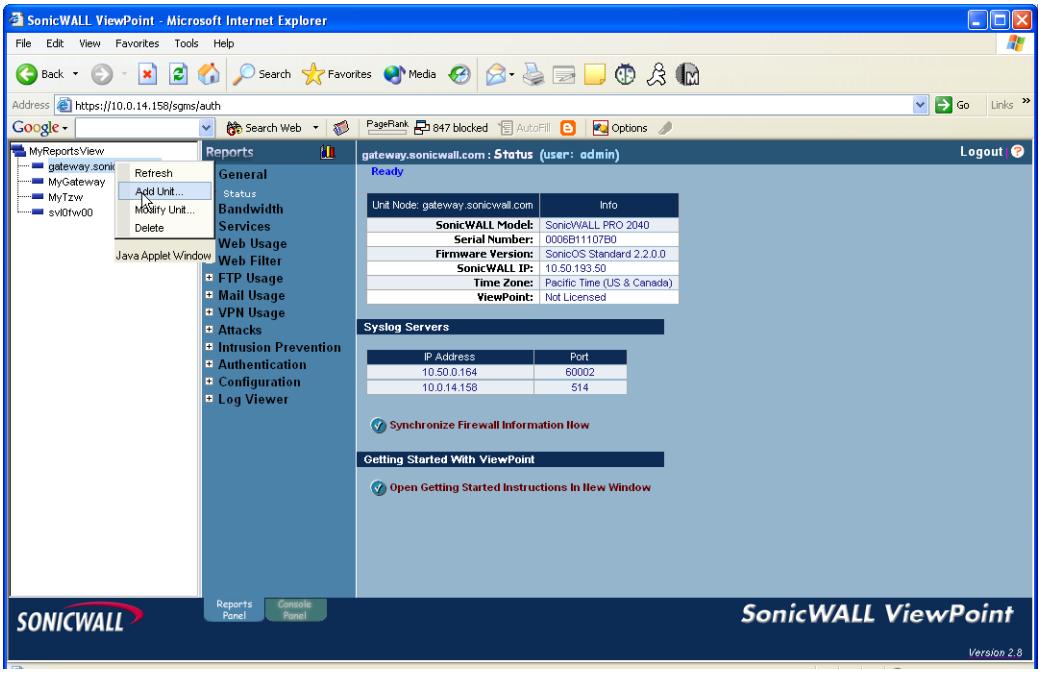
Note: *If SonicWALL ViewPoint is located on the WAN side of your SonicWALL appliance and behind a firewall and there is a VPN tunnel between your SonicWALL appliance and the firewall, SonicWALL ViewPoint can access the SonicWALL appliance using HTTPS or HTTP over the VPN tunnel.*

Adding a SonicWALL Appliance to SonicWALL ViewPoint

This section describes how to add a SonicWALL appliance to SonicWALL ViewPoint. To add a SonicWALL appliance, follow these steps:

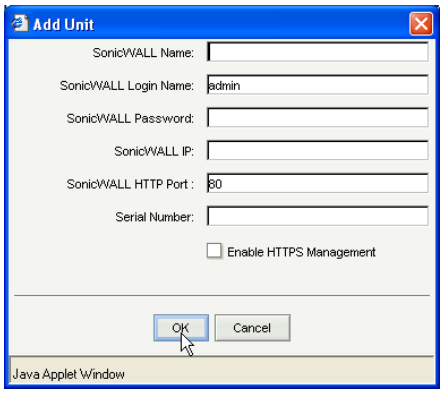
1. Start and log into SonicWALL ViewPoint. The Status page appears (Figure 14).

Figure 14: Status Page



2. Right-click in the left pane of the SonicWALL ViewPoint UI and select **Add Unit** from the pop-up menu. The Add Unit dialog box appears (Figure 15).

Figure 15: Add Unit Dialog Box



3. Enter a descriptive name for your SonicWALL appliance in the **SonicWALL Name** field.

   Note: *Do not enter the single quote character (') in the SonicWALL Name field.*

4. Enter the username used to access your SonicWALL appliance in the **SonicWALL Login Name** field (default: admin).
5. Enter the password used to access the SonicWALL appliance in the **SonicWALL Password** field.
6. Enter the IP address that will be used to access the SonicWALL appliance in the **SonicWALL IP Address** field.

   Note: *If SonicWALL ViewPoint is on the same LAN as the SonicWALL appliance or accesses it through a VPN tunnel, enter the LAN IP address. If SonicWALL ViewPoint will access the SonicWALL appliance from the WAN interface, enter the WAN IP address.*

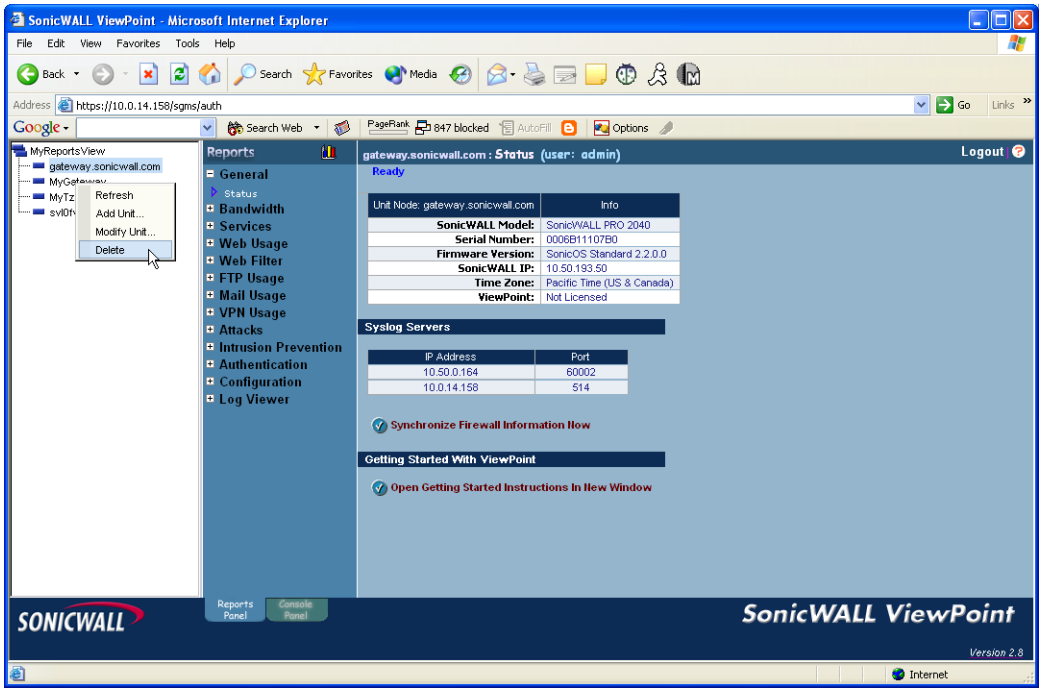
7. Enter the HTTP port number used to access your SonicWALL appliance in the **SonicWALL HTTP Port** field (default: 80).
8. If SonicWALL ViewPoint will log into the SonicWALL appliance using secure HTTP (HTTPS), select the Enable HTTPS Management **check box** and enter the HTTPS port number in the **SonicWALL HTTPS Port** field (default: 443).
9. Enter the serial number of the SonicWALL appliance in the **Serial Number** field.
10. Click **OK**. SonicWALL ViewPoint finds the SonicWALL appliance and validates its ViewPoint license. When this is complete, the SonicWALL appliance will appear in the left pane of the SonicWALL ViewPoint UI.

Deleting SonicWALL Appliances from SonicWALL ViewPoint

To delete a SonicWALL appliance from SonicWALL ViewPoint, follow these steps:

1. Start and log into SonicWALL ViewPoint. The Status page appears (Figure 16).

Figure 16: Status Page



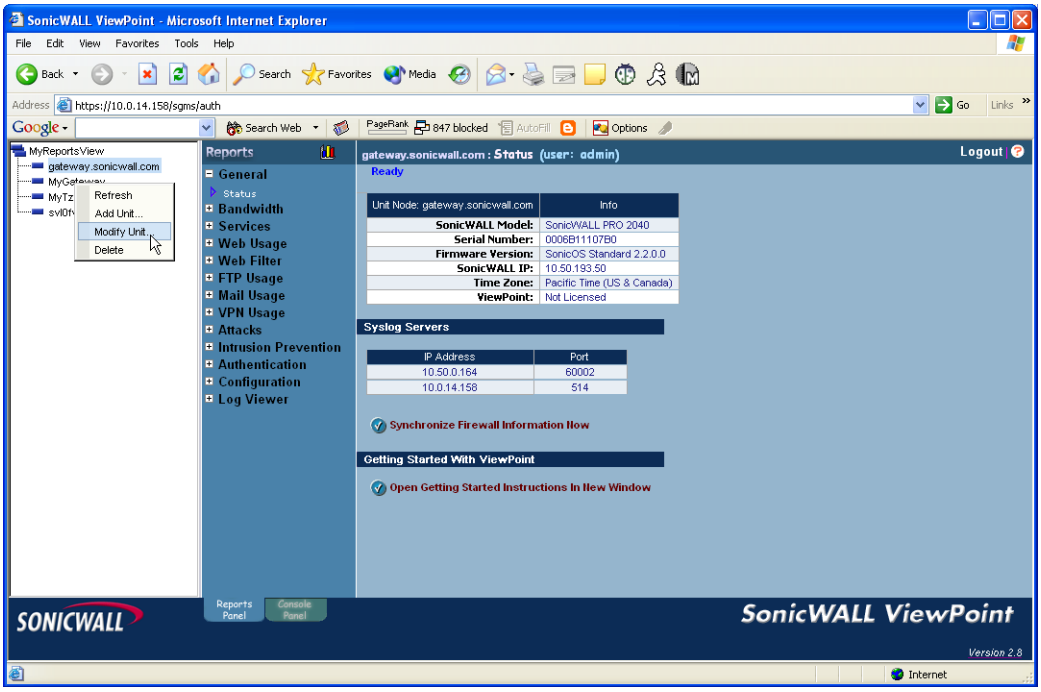
2. Select a unit in the left pane of the SonicWALL ViewPoint UI.
3. Right-click the unit and select **Delete Unit** from the pop-up menu. You are prompted to confirm the deletion.
4. Click **Yes**. The SonicWALL appliance disappears from the left pane of the SonicWALL ViewPoint UI and will be deleted from the ViewPoint database.

Modifying Settings for a SonicWALL Appliance

To change the settings of a SonicWALL appliance, whether you are changing the IP address, password, or other settings, follow these steps:

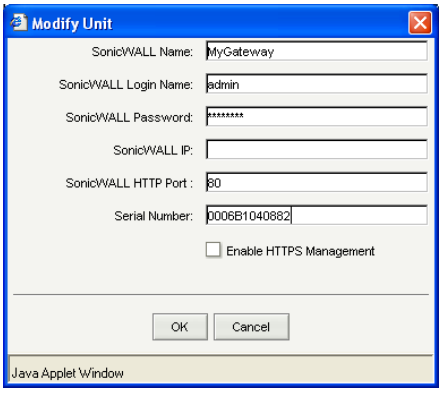
1. Start and log into SonicWALL ViewPoint. The Status page appears (Figure 17).

Figure 17: Status Page



2. Select a unit in the left pane of the SonicWALL ViewPoint UI.
3. Right-click on the unit and select **Modify Unit** from the pop-up menu. The Modify Unit dialog box appears (Figure 18).

Figure 18: Modify Unit Dialog Box



4. Make changes to any of the fields.When you are finished, click **OK**. After SonicWALL ViewPoint finds the SonicWALL appliance and validates its ViewPoint license, the SonicWALL appliance will re-appear in the left pane of the SonicWALL ViewPoint UI.

Configuring User Settings

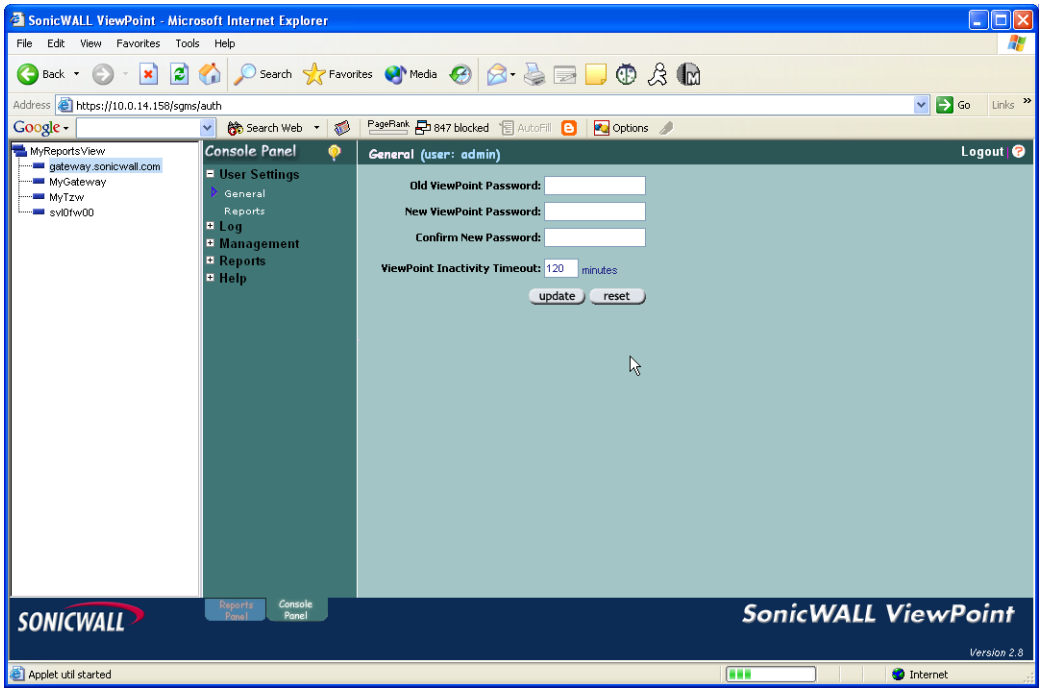
This section describes how to configure user settings.

Changing ViewPoint Login Password

To modify the login password for SonicWALL ViewPoint, follow these steps.

1. Start and log into SonicWALL ViewPoint.
2. Click the **Console Panel** tab at the bottom of the SonicWALL ViewPoint UI.
3. Expand the **User Settings** tree and click **General**. The General page appears.

Figure 19: Status Page



4. Enter the current ViewPoint password in the **Old ViewPoint Password** field.
5. Enter the new ViewPoint password in the **New ViewPoint Password** field.
6. Reenter the new ViewPoint password in the **Confirm ViewPoint Password** field.
7. The ViewPoint Inactivity Timeout period specifies how long SonicWALL ViewPoint waits before logging out an inactive user. To prevent someone from accessing the SonicWALL ViewPoint UI when SonicWALL ViewPoint users are away from their desks, enter an appropriate value in the **ViewPoint Inactivity Timeout** field (default: 5 minutes).

   Note: *This field can be set to a maximum of 32767 minutes.*
8. When you are finished, click **Update**. The password is changed. To clear all screen settings and start over, click **Reset**.

   Note: *The maximum size of the SonicWALL ViewPoint User ID is 24 alphanumeric characters. The password is one-way hashed and any password of any length can be hashed into a fixed 32 character long internal password.*

Configuring Presentation Options

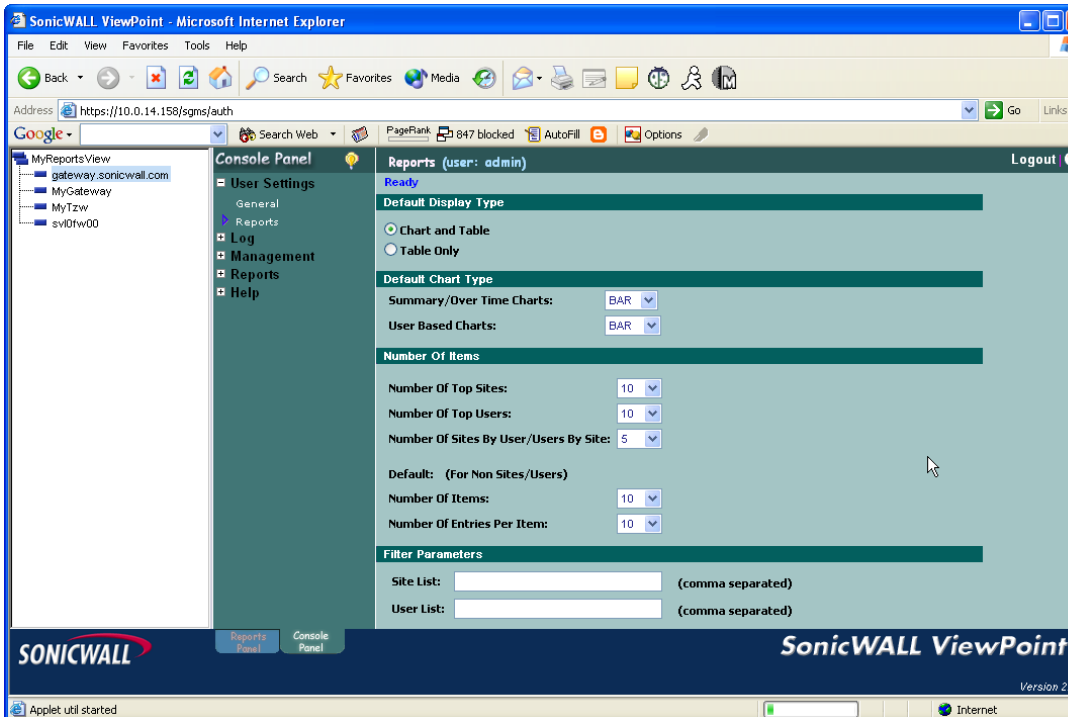
SonicWALL Viewpoint uses a default group of settings that specifies the types of charts and the amount of data that is displayed. This settings can be changed during a session, but will be cleared once you log out.

To change the default settings for your user ID, follow these steps:

1. Start and log into SonicWALL ViewPoint as the user whose default settings you will modify.

2. Click the **Console** tab.
3. Expand the User Settings tree and click **Report Settings**. The Report Settings page appears (Figure 20).

Figure 20: Report Settings Page



4. Select whether the reports will contain a chart and table or table only.
5. Select whether Summary and Over Time charts will be displayed as bar graphs or plots from the **Summary/ Over Time Charts** list box (default: BAR).
6. Select whether User charts will be displayed as pie charts, bar graphs, area charts, or plots from the **User Based Charts** list box (default: PIE).
7. Select the number of sites to display in Top Sites reports (default: 10).
8. Select the number of users to display in Top Users reports (default: 10).
9. Select the number of sites to display in Sites by User reports (default: 5).
10. Select the number of items to display in all other reports (default: 10).
11. Select the number of entries per item to display in all other reports (default: 10).
12. To only display data for a specified group of web sites, enter the URL of each site (separated by commas) in the **Site List** field. Because this field uses pattern matching, entries such as “yahoo.com” will display data for mail.yahoo.com, shopping.yahoo.com, and so on.
13. To only display data for a specified group of users, enter the username of each user (separated by commas) in the **User List** field. Because this field uses pattern matching, entries such as “john” will display data for johnm, 123john, and so on.
14. To configure the default start and end times for hourly reports, select a start and end time from the **Start** and **End** list boxes.
15. To specify a list of web sites that will be excluded from the reports, enter a string that specifies a URL or portion of a URL to exclude from the reports. For example:

```
www.yahoo.com
ebay.com
netscape
...
```

Click **Add**. Any web site that contains a portion of the string that you specified will be excluded from the report.

Repeat this step for each web site to exclude.

Configuring Management Settings

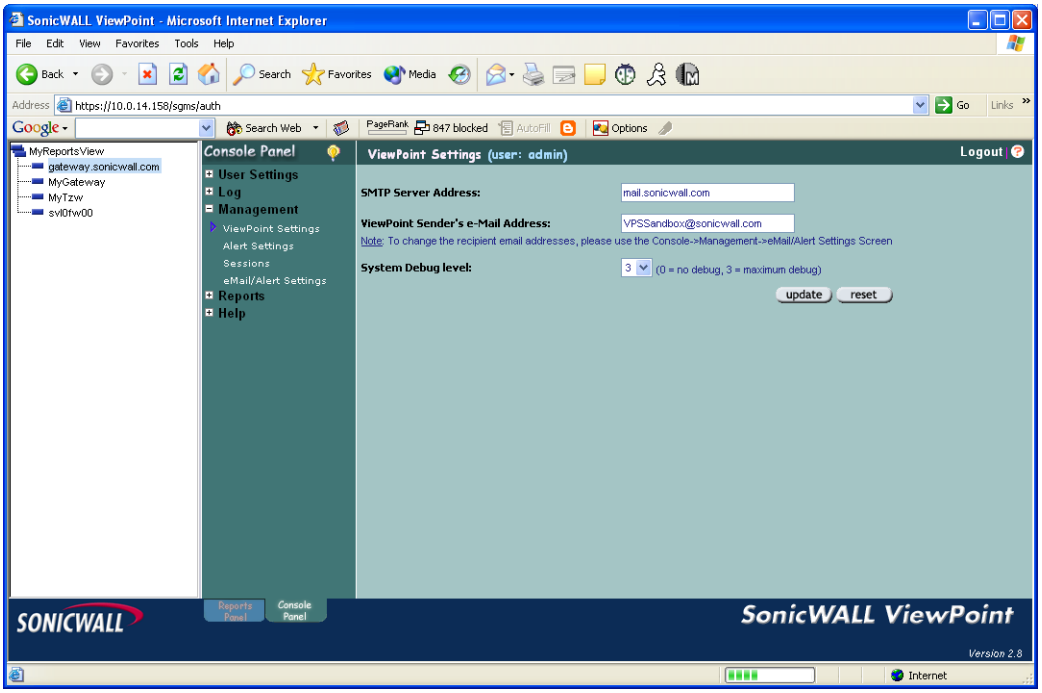
This section describes how to configure management settings.

Configuring General ViewPoint Settings

To modify the SonicWALL ViewPoint settings, follow these steps:

1. Start and log into SonicWALL ViewPoint.
2. Click the **Console Panel** tab at the bottom of the SonicWALL ViewPoint UI.
3. Expand the **Management** tree and click **ViewPoint Settings**. The ViewPoint Settings page appears (Figure 21).

Figure 21: ViewPoint Settings Page



4. Enter the IP address of the Simple Mail Transfer Protocol (SMTP) server in the **SMTP Server Address** field.
5. Enter the sender's email address that will appear in messages sent from the SonicWALL ViewPoint in the **ViewPoint Sender's e-Mail Address** field.
6. Select the amount of debug information that is stored from the **System Debug Level** field. For no debugging, enter 0. For verbose debugging, enter 3.
7. When you are finished, click **Update**. The ViewPoint settings are changed. To clear the screen settings and start over, click **Reset**.

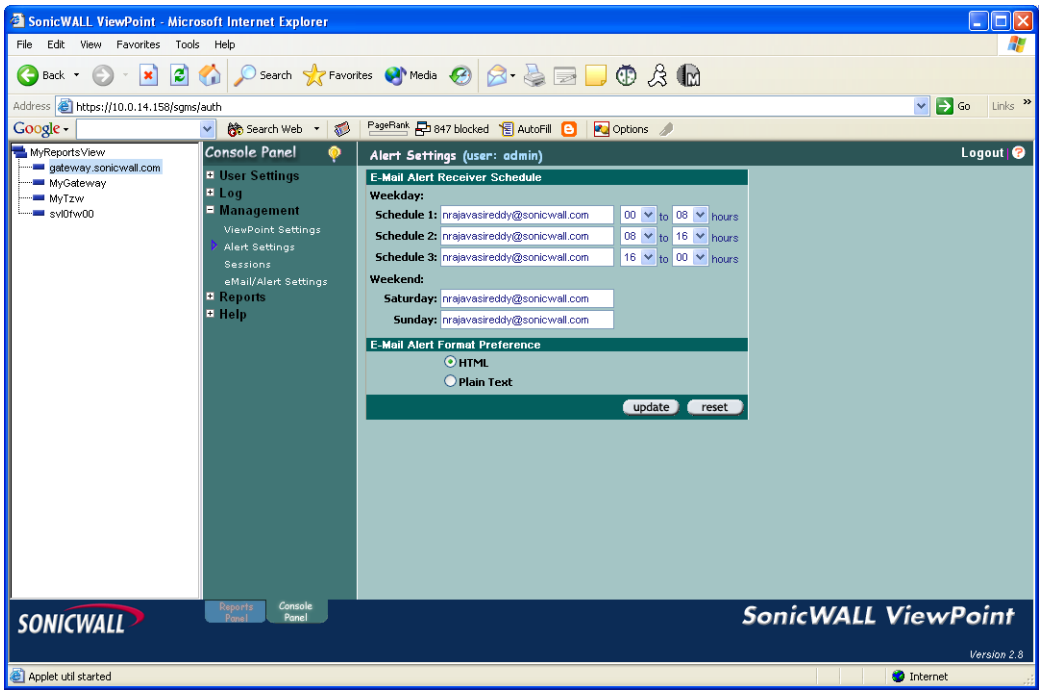
Configuring Alert Settings

The Alert Settings page specifies which email addresses receive alerts notifications during specific times.

To configure the alert notification settings, follow these steps:

1. Start and log into SonicWALL ViewPoint.
2. Click the **Console Panel** tab at the bottom of the SonicWALL ViewPoint user interface (UI).
3. Expand the Management tree and click **Alert Settings**. The Alert Settings page appears (Figure 22).

Figure 22: SonicWALL ViewPoint Alert Settings Page



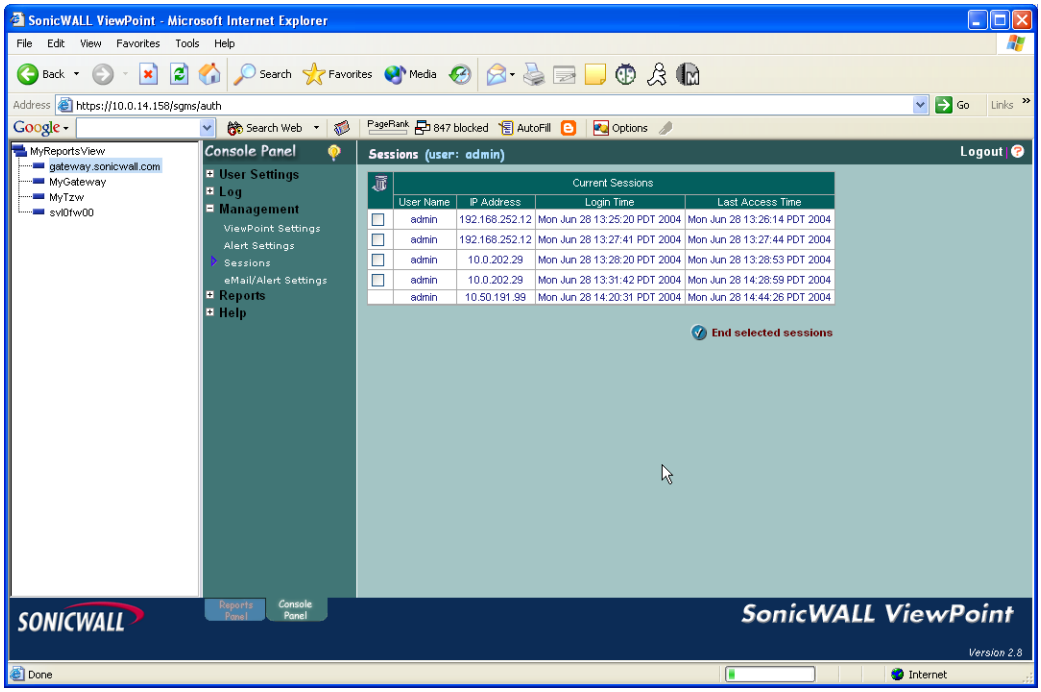
4. Configure the email address(es) that will receive notifications and the times that they will receive them:
   - **Schedule 1**—Specifies who will receive notifications during the first weekday schedule. Enter one or more email addresses (separated by commas) and specify the start and end time for the shift.
   - **Schedule 2**—Specifies who will receive notifications during the second weekday schedule. Enter one or more email addresses (separated by commas) and specify the start and end time for the shift.
   - **Schedule 3**—Specifies who will receive notifications during the third weekday schedule. Enter one or more email addresses (separated by commas) and specify the start and end time for the shift.
   - **Saturday**—Specifies who will receive notifications on Saturday. Enter one or more email addresses (separated by commas) and specify the start and end time for the shift.
   - **Saturday**—Specifies who will receive notifications on Sunday. Enter one or more email addresses (separated by commas) and specify the start and end time for the shift.
5. Select whether the email will be sent in **HTML** or **Plain Text**.
6. When you are finished, click **Update**. The settings are saved.

Managing ViewPoint Sessions

To manage SonicWALL ViewPoint login sessions, follow these steps:

1. Start and log into SonicWALL ViewPoint.
2. Click the **Console Panel** tab at the bottom of the SonicWALL ViewPoint user interface (UI).
3. Expand the **Management** tree and click **Sessions**. The Sessions page appears (Figure 23).

Figure 23: Sessions Page



4. Select the check box of each user to log off and click **End selected sessions**. The selected users are logged off.

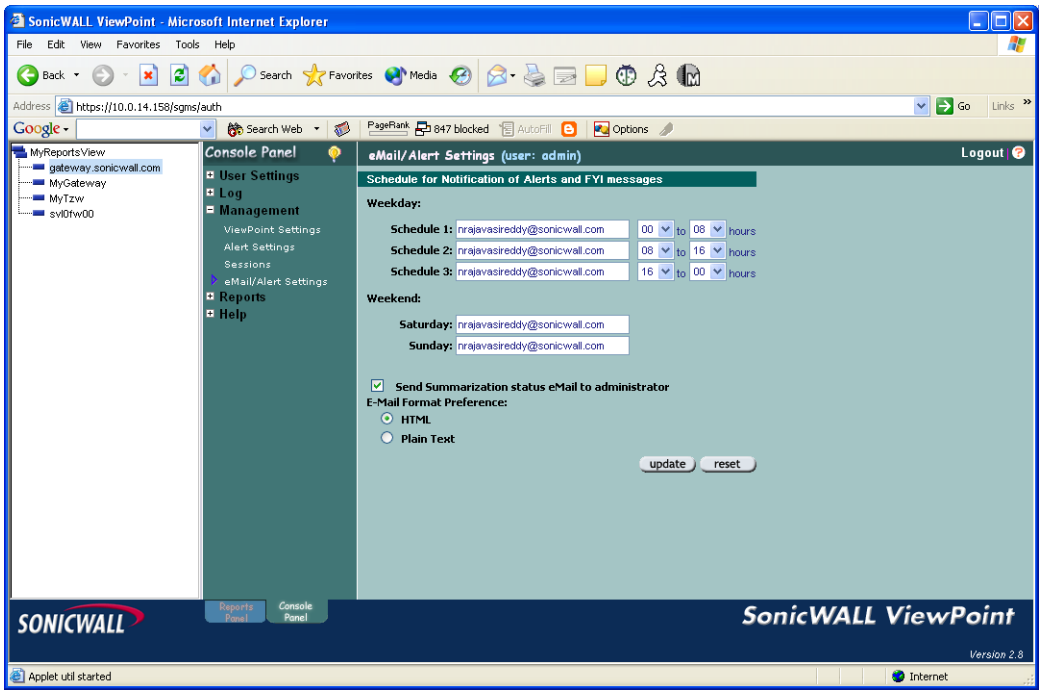
Configuring Email/Alert Setting Notifications

The email/Alert Settings page specifies which email addresses receive email alerts and FYI messages during specific times.

To configure the alert notification settings, follow these steps:

1. Start and log into SonicWALL ViewPoint.
2. Click the **Console Panel** tab at the bottom of the SonicWALL ViewPoint user interface (UI).
3. Expand the Management tree and click **email/Alert Settings**. The email/Alert Settings page appears (Figure 24).

Figure 24: SonicWALL ViewPoint Alert Settings Page



4. Configure the email address(es) that will receive notifications and the times that they will receive them:
   - **Schedule 1**—Specifies who will receive notifications during the first weekday schedule. Enter one or more email addresses (separated by commas) and specify the start and end time for the shift.
   - **Schedule 2**—Specifies who will receive notifications during the second weekday schedule. Enter one or more email addresses (separated by commas) and specify the start and end time for the shift.
   - **Schedule 3**—Specifies who will receive notifications during the third weekday schedule. Enter one or more email addresses (separated by commas) and specify the start and end time for the shift.
   - **Saturday**—Specifies who will receive notifications on Saturday. Enter one or more email addresses (separated by commas) and specify the start and end time for the shift.
   - **Saturday**—Specifies who will receive notifications on Sunday. Enter one or more email addresses (separated by commas) and specify the start and end time for the shift.
5. Select whether the email will be sent in **HTML** or **Plain Text**.
6. When you are finished, click **Update**. The settings are saved.

Configuring Reporting Settings

This section describes how to configure reporting settings. These include how often the summary information is updated, the number of days that summary information is stored, and the number of days that raw data is stored.

These reports are constructed from the most current available summary data. In order to create summary data, SonicWALL ViewPoint must parse the raw data files.

Note: *Because reports are based on the most current summary data, the report may be old. For example, if the data was summarized four hours ago, all activity that occurred since the last summary will be missing from the report.*

When configuring SonicWALL ViewPoint, you can select the amount of summary information to store. Summary information consumes approximately one kilobyte of information per SonicWALL appliance per day. Make sure the database is large enough to accommodate the number of days that you choose.

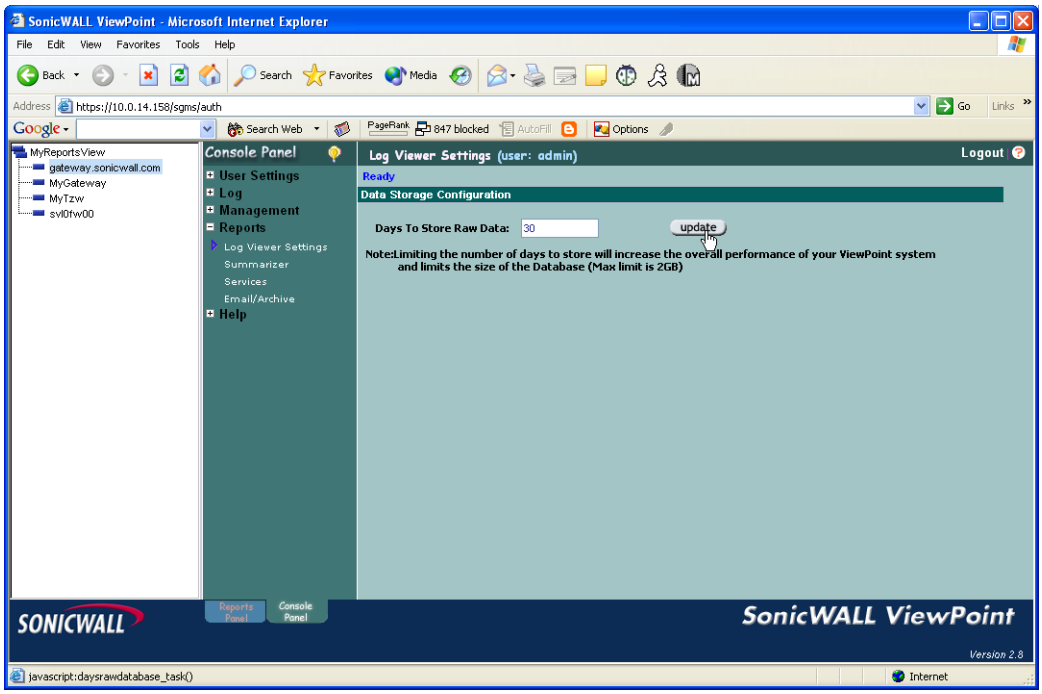
Additionally, you can select the amount of raw data to store. The raw data is made up of information for every connection. Depending on the amount of traffic, this can quickly consume an enormous amount of space in the database. Be very careful when selecting how much raw information to store.

Configuring Log Viewer Settings

To configure Log Viewer settings, follow these steps:

1. Start and log into SonicWALL ViewPoint.
2. Click the **Console** tab.
3. Select a SonicWALL appliance.
4. Expand the Reports tree and click **Log Viewer Settings**. The Log Viewer Settings page appears (Figure 25).

Figure 25: Log Viewer Settings Page



5. Specify how many days of raw data SonicWALL ViewPoint will store in the database from the **Days To Store Raw Data** list box and click **Submit**. To save all information, enter **All**.
6. To save the changes, click **Submit**.

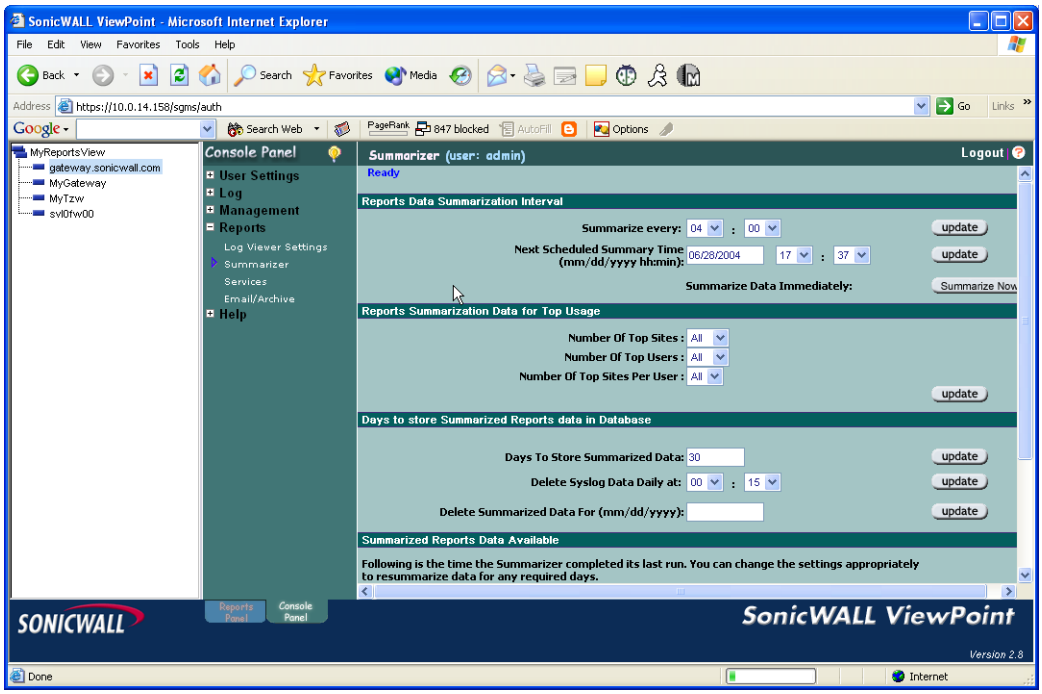
General Report Settings

To configure SonicWALL ViewPoint settings, follow these steps:

1. Start and log into SonicWALL ViewPoint.

2. Click the **Console** tab.
3. Select a SonicWALL appliance.
4. Expand the Reports tree and click **Summarizer**. The Summarizer page appears (Figure 26).

Figure 26: Summarizer Page



5. For improved scalability, reporting summarization can be distributed among the Agents. To enable distributed summarization, select the **Enable Distributed Summarizer** check box.
6. Specify how often SonicWALL ViewPoint processes and updates summary information from the **Time Between Summaries** list box and click **Update**.
7. To specify the next summary time, enter a date and time in the **Next Scheduled Summary Time** field and click **Update**.
8. To update the summary information now, click **Summarize Data Immediately**. SonicWALL ViewPoint will automatically process the latest information and make it available for immediate viewing.

   Note: *This will not affect the normally scheduled updates.*
9. Configure the following report setting defaults:
   - Select the default number of sites that will be displayed in Top Sites reports from the **Number of Top Sites** list box.
   - Select the default number of users that will be displayed in Top Users reports from the **Number of Top Users** list box.
   - Select the default number of sites that will be displayed in Top Sites Per User reports from the **Number of Top Sites Per User** list box.
10. Specify how many days of summarized data the SonicWALL ViewPoint will store in the database from the **Days To Store Summarized Data** list box and click **Submit**. To save all information, enter **All**.

    Summarized data consumes approximately one kilobyte of information per SonicWALL appliance per day. Make sure the database is large enough to accommodate the number of days that you choose.
11. The **Summary Data Available Until** field displays when the data was last summarized. To re-summarize any data, enter a date and time and click **Update**.

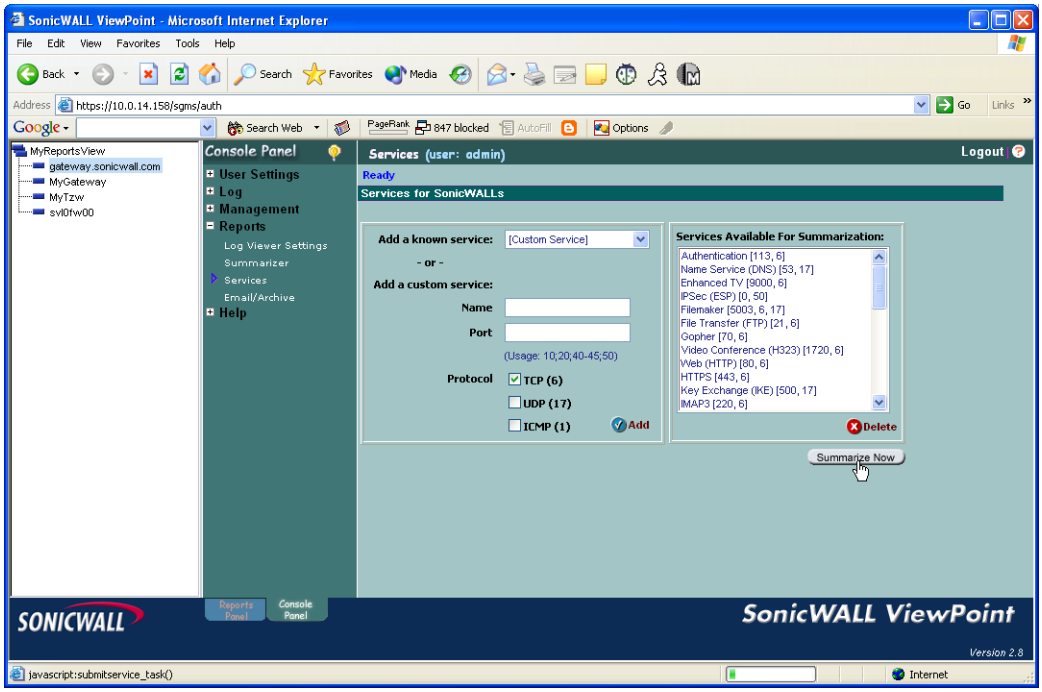
Adding a Service

SonicWALL ViewPoint can monitor known services or custom services.

To add a service that will be displayed in the services reports, follow these steps.

1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Expand the Reports tree and click **Services**. The Services page appears (Figure 27).

Figure 27: Services Page



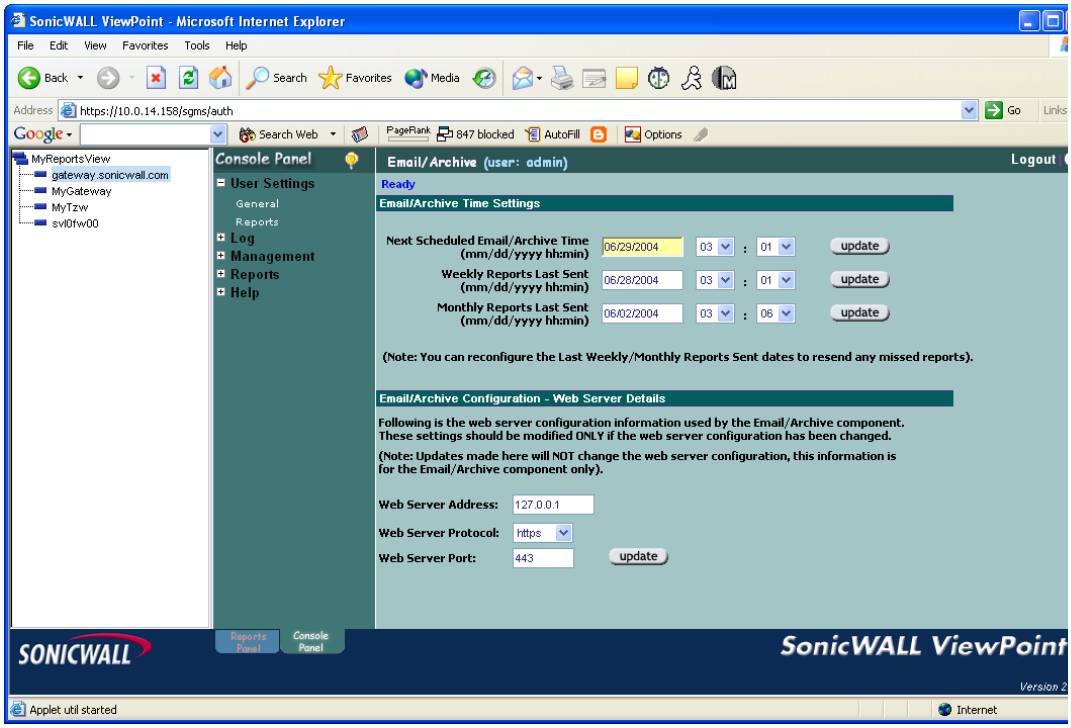
4. To add a known service, select it from the **Known Services** list box and click **Add**.
5. To add a custom service, enter a name in the **Name** field, enter the service's port range, and select the protocol that it uses from the **Protocol** list box. Click **Add**.
6. To delete a service, select it and click **Delete**.

Configuring Email/Archive Settings

To configure Email/Archive and web server settings, follow these steps:

1. Start and log into SonicWALL ViewPoint.
2. Click the **Console** tab.
3. Expand the Reports tree and click **Email/Archive**. The Email/Archive page appears (Figure 28).

Figure 28: Email/Archive Page



4. This page shows when the next scheduled archive time will occur and when the last weekly and monthly reports were sent.
5. To set the next archive time, enter the date and time in the **Next Scheduled Email/Archive Time** fields and click **Update**.
6. To change the timestamp of the last weekly report, enter the date and time in the **Weekly Reports Last Sent** fields and click **Update**.
7. To change the timestamp of the last monthly report, enter the date and time in the **Monthly Reports Last Sent** fields and click **Update**.
8. If the web server address, port, or protocol has changed since installation, this will affect reporting and you should enter the new address, port, and protocol in the **Current Web Server Configuration** section.
9. When you are finished, click **Update**. The changes are saved.

Viewing Reports

This chapter describes how to generate reports using SonicWALL ViewPoint.

Select from the following reports:

- To view status reports, see “Viewing Status Reports” on page 39.
- To view general bandwidth usage reports, see “Viewing Bandwidth Reports” on page 42.
- To view bandwidth reports, by service, see “Viewing Service Usage Reports” on page 50.
- To view web usage bandwidth reports, see “Viewing Web Usage Reports” on page 54.
- To view reports on the number of attempts that users made to access blocked web sites, see “Viewing Web Filter Reports” on page 69.
- To view file transfer protocol (FTP) bandwidth usage reports, see “Viewing File Transfer Protocol Reports” on page 82.
- To view mail bandwidth usage reports, see “Viewing Mail Usage Reports” on page 89.
- To view virtual private networking (VPN) reports, see “Viewing VPN Usage Reports” on page 96.
- To view reports on attempted attacks, see “Viewing Attack Reports” on page 109.
- To view reports on intrusion prevention, see “Viewing Intrusion Prevention Reports” on page 122.
- To view detailed logging information, see “Viewing the Log” on page 141.
- To view user and administrator authentication reports, see “Viewing Authentication Reports” on page 136.

Viewing Status Reports

Status reports display the number of hours that one or more SonicWALL appliances were online and functional during the time period.

From this information, you can determine find trouble spots within your network. For example, this report could reveal that a SonicWALL appliance that is having network connectivity issues caused by the ISP.

Note: *All reports appear in the Firewall’s time zone.*

Select from the following:

- To view a status summary, see “Viewing the Status Summary Report” on page 39.
- To view bandwidth usage over a period of time, see “Viewing Bandwidth Usage Over Time” on page 46.

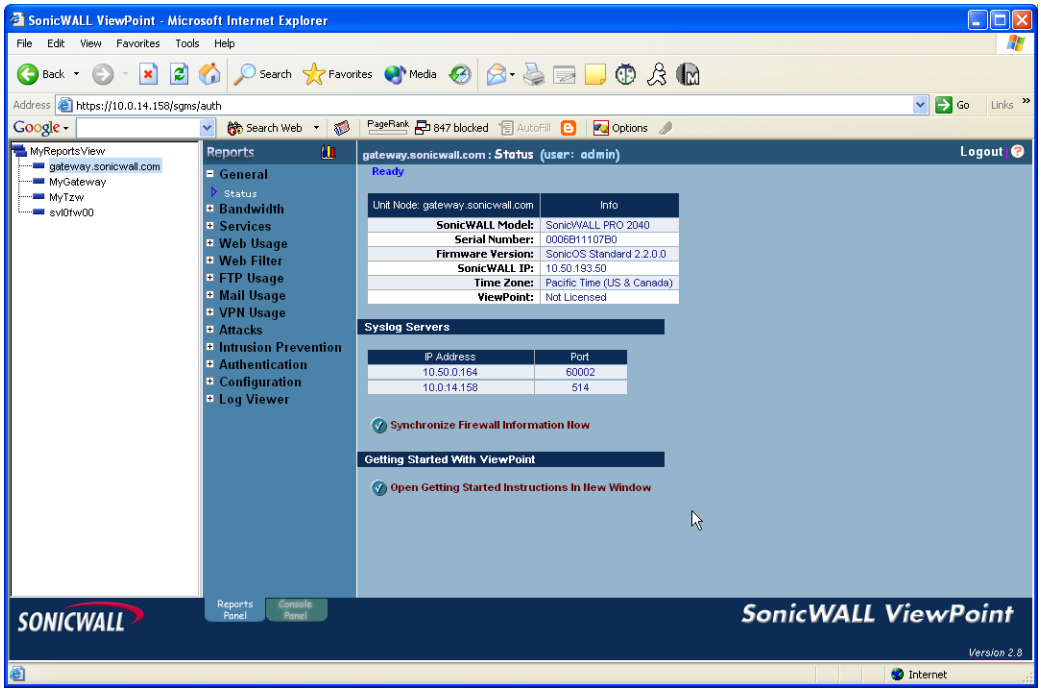
Viewing the Status Summary Report

The Status Summary report contains information on the amount of status of a SonicWALL appliance or group of Status appliances during each hour of the specified day.

To view the Status Summary report, follow these steps:

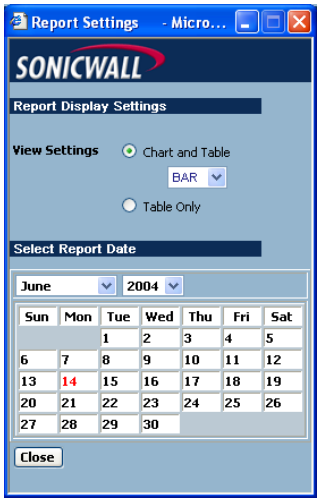
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Status tree and click **Summary**. The Summary page appears (Figure 29).

Figure 29: Summary Page



5. The bar graph displays the amount of time the SonicWALL appliance(s) were online and functional during each hour of the day.
6. The table contains the following information:
   - **Hour**—when the sample was taken.
   - **Up Time**—number of minutes during the hour that the SonicWALL appliance was "Up."
7. SonicWALL ViewPoint shows today's report. To change the date of the report and other settings, click **Settings**. The Report Settings dialog box appears (Figure 34).

Figure 30: Report Settings Dialog Box



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view from the **Select Report Date** area.
10. When you are finished, click **Close**. The SonicWALL ViewPoint displays the report for the selected day.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

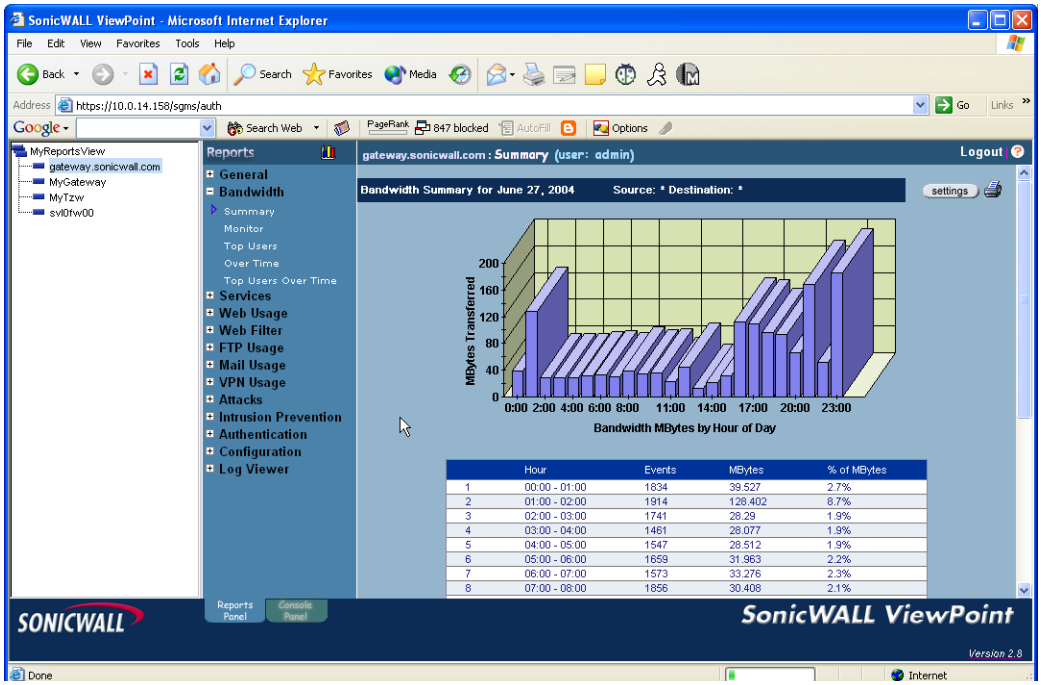
Viewing Status Over Time

The Status Over Time report displays the how often the SonicWALL appliance or a group of SonicWALL appliances was available during the specified time period.

To view the Status Over Time report, follow these steps:

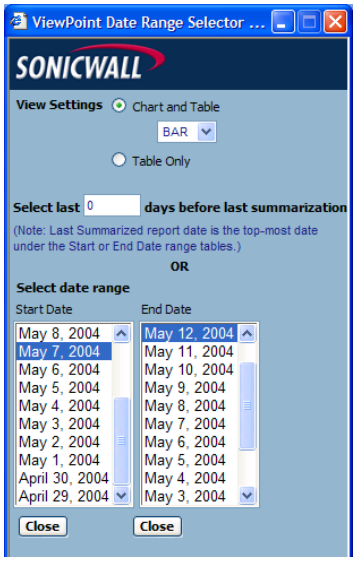
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Status tree and click **Over Time**. The Over Time page appears (Figure 31).

Figure 31: Over Time Page



5. The bar graph displays the amount of time the SonicWALL appliance(s) were available during each day of the specified time period.
6. The table contains the following information:
   - **Date**—when the sample was taken.
   - **Up Time**—amount of time (in hours) that the SonicWALL appliance was "Up."
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears.

Figure 32: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.
9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

Viewing Bandwidth Reports

Bandwidth reports display the amount of data transferred through one or more selected SonicWALL appliances.

Bandwidth reports are an ideal starting point for viewing overall bandwidth usage. You can view bandwidth usage view by the hour, day, or over a period of days. Additionally, you can view the top users of bandwidth.

From this information, you can determine network strategies. For example, if you need more bandwidth, you might need to upgrade network equipment, or you might simply need to curtail the bandwidth usage of a few employees.

Note: *All reports appear in the Firewall's time zone.*

Select from the following:

- To view a summary of the daily bandwidth usage, see "Viewing the Bandwidth Summary Report" on page 42.
- To view bandwidth usage in real time, see "Monitoring Bandwidth Usage in Real Time" on page 44.
- To view the users who consume the most bandwidth, see "Viewing the Top Users of Bandwidth" on page 44.
- To view bandwidth usage over a period of time, see "Viewing Bandwidth Usage Over Time" on page 46.
- To view the users who consume the most bandwidth over time, see "Viewing the Top Users of Bandwidth Over Time" on page 48.

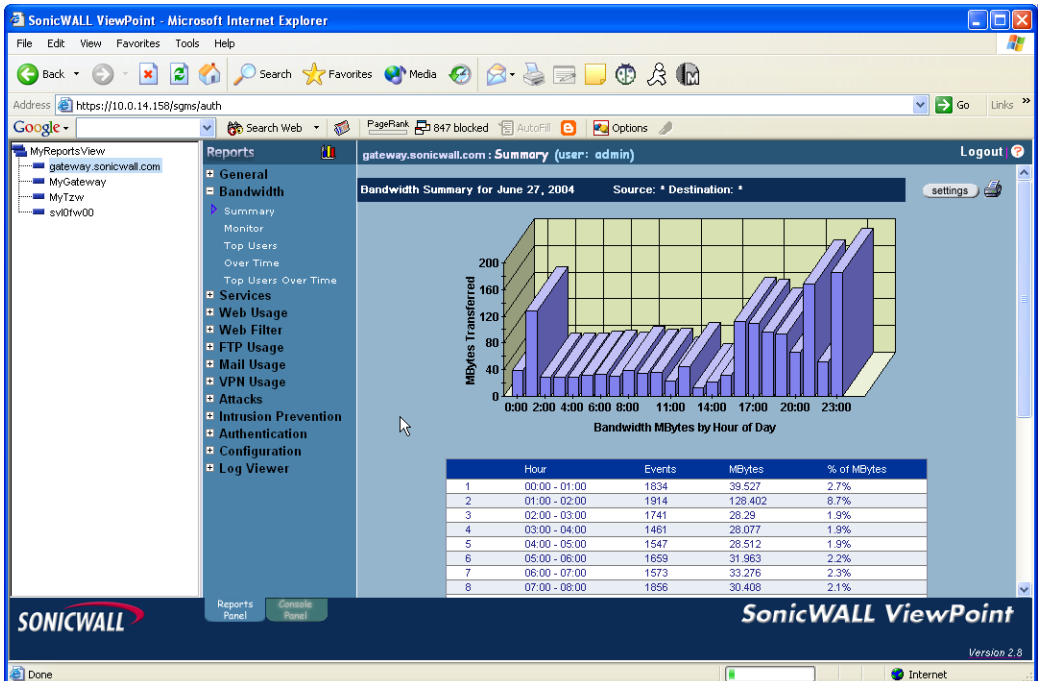
Viewing the Bandwidth Summary Report

The Bandwidth Summary report contains information on the amount of traffic handled by a SonicWALL appliance or group of SonicWALL appliances during each hour of the specified day.

To view the Bandwidth Summary report, follow these steps:

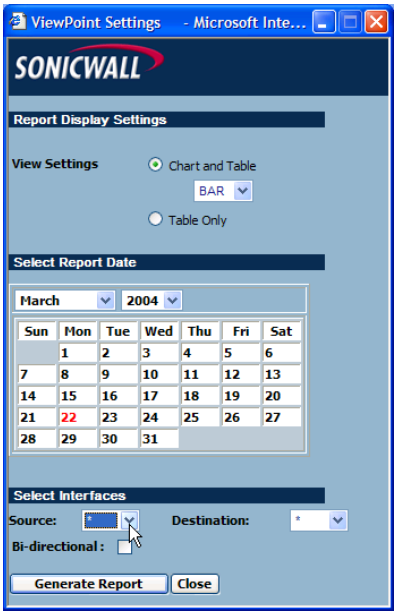
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Bandwidth tree and click **Summary**. The Summary page appears (Figure 33).

Figure 33: Summary Page



5. The bar graph displays the amount of bandwidth transferred during each hour of the day.
6. The table contains the following information:
   - **Hour**—when the sample was taken.
   - **Events**—number of events or "hits."
   - **MBytes**—number of megabytes transferred.
   - **% of MBytes**—percentage of megabytes transferred during this hour, compared to the day. For example, if 1000 megabytes of data was transferred during the day and 100 megabytes was transferred at the 12:00 time period, the **% of MBytes** field will display 10%.
7. SonicWALL ViewPoint shows today's report. To change the date of the report and other settings, click **Settings**. The Report Settings dialog box appears (Figure 34).

Figure 34: Report Settings Dialog Box



8. Select the type of chart to display from the **View Settings** area.

9. Select the year, month, and day that you would like to view from the **Select Report Date** area.
10. Select the **Source** and **Destination** interfaces to view. If you want to track bandwidth usage in both directions, select the **Bi-directional** check box.
11. When you are finished, click **Generate Report**. SonicWALL ViewPoint displays the report for the selected day.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

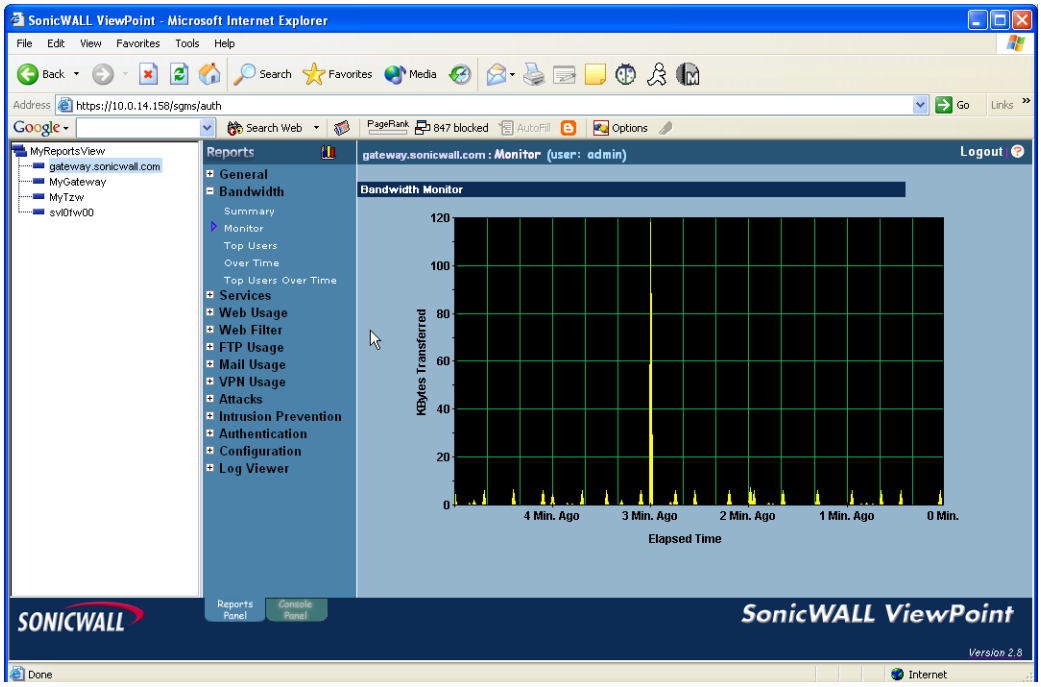
Monitoring Bandwidth Usage in Real Time

The Bandwidth Monitor displays bandwidth usage for the selected SonicWALL appliance in real time.

To view the Bandwidth Monitor, follow these steps:

1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Bandwidth tree and click **Monitor**. The Monitor page appears (Figure 35).

Figure 35: Monitor Page



5. The Bandwidth Monitor shows the amount of data transferred during each sampling period for the last five minutes. The sampling period is five seconds.

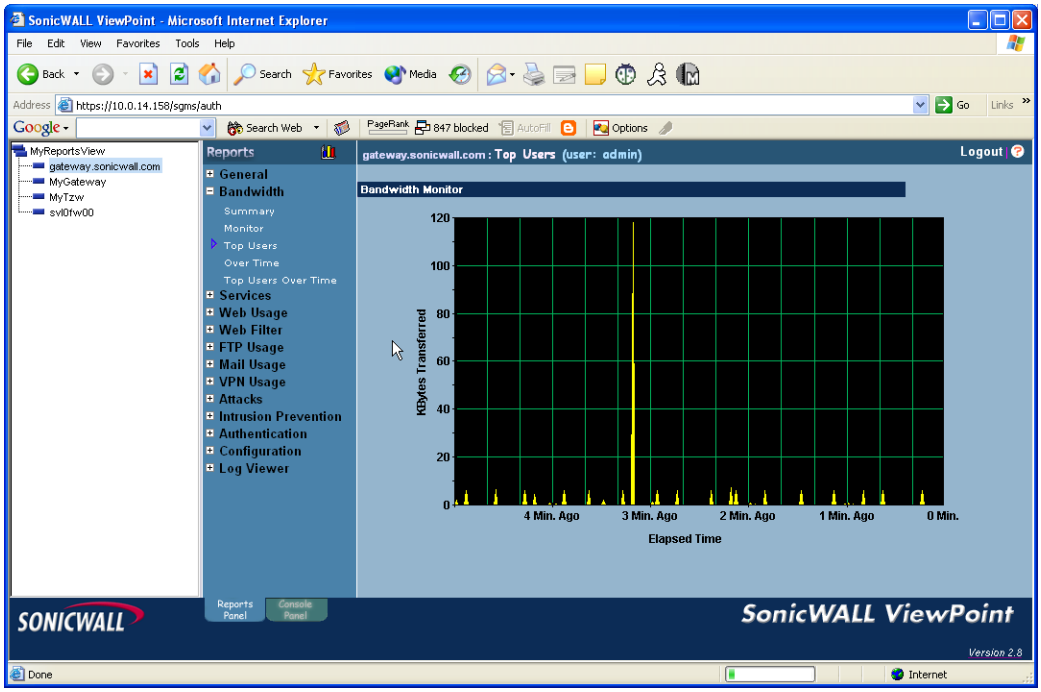
Viewing the Top Users of Bandwidth

The Top Users report displays the users who used the most bandwidth on the specified date.

To view the Top Users report, follow these steps:

1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Bandwidth tree and click **Top Users**. The Top Users page appears (Figure 36).

Figure 36: Top Users Page



5. The pie chart displays the percentage of bandwidth transferred by each user.
6. The table contains the following information:
   - **Users**—the IP address of the user.
   - **Connections**—number of events or “hits.”
   - **MBytes**—number of megabytes.
   - **% of MBytes—**percentage of megabytes transferred by this user, compared to all users. For example, if 1000 megabytes of data was transferred during the day and 200 megabytes was transferred by the top user, the **% of MBytes** field will display 20%.
7. By default, SonicWALL ViewPoint shows today’s report, a pie chart, and the ten top users. To change these settings, click **Settings**. The Report Settings dialog box appears.

Figure 37: Report Settings Dialog Box

8. Select the number of users that will be displayed from the **Number of Users** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.
11. To display a limited group of users, enter the user IDs in the **Select Users** field and separate each entry with a comma.

    Note: *This field does not use pattern matching. For example, "john" will not match john_smith, john42, or big_john.*
12. When you are finished, click **Close**. SonicWALL ViewPoint displays the report for the selected day.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

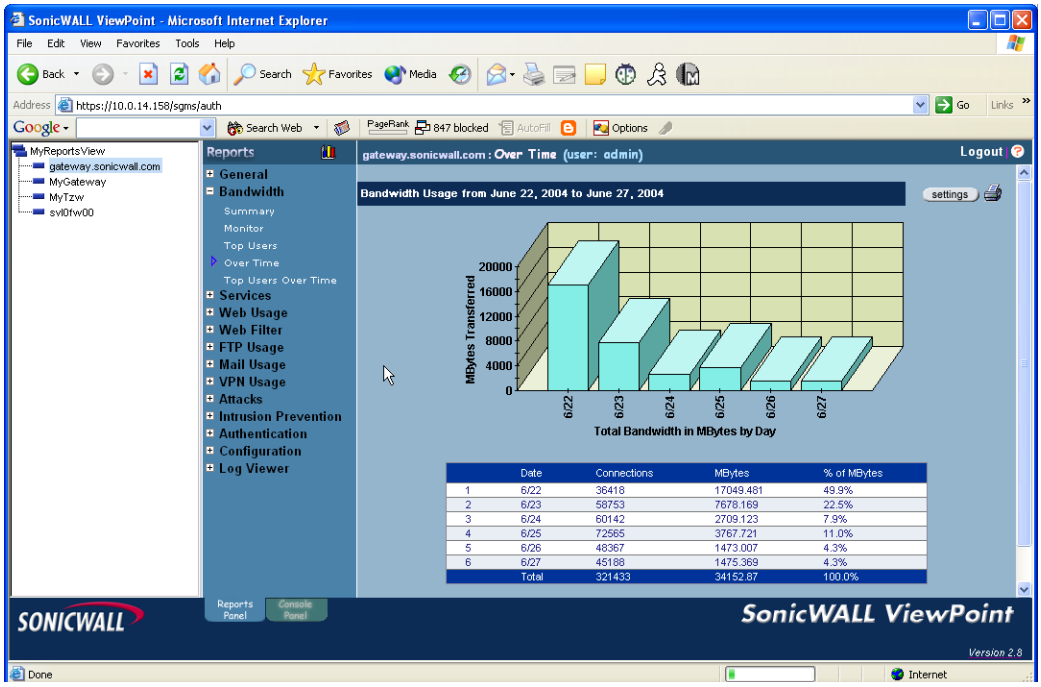
Viewing Bandwidth Usage Over Time

The Bandwidth Over Time report displays the daily amount of traffic handled by a SonicWALL appliance or a group of SonicWALL appliances for the specified time period.

To view the Bandwidth Over Time report, follow these steps:

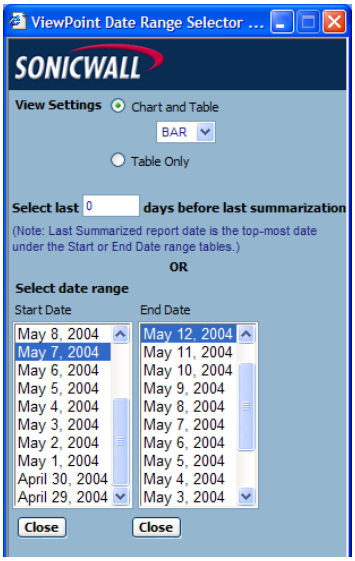
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Bandwidth tree and click **Over Time**. The Over Time page appears (Figure 38).

Figure 38: Over Time Page


SonicWALL ViewPoint - Microsoft Internet Explorer
gateway.sonicwall.com : Over Time (user: admin)
Logout
Bandwidth Usage from June 22, 2004 to June 27, 2004
settings
MBytes Transferred
Total Bandwidth in MBytes by Day
Date Connections MBytes % of MBytes
1 6/22 36418 17049.481 49.9%
2 6/23 58753 7678.169 22.5%
3 6/24 60142 2709.123 7.9%
4 6/25 72565 3767.721 11.0%
5 6/26 48367 1473.007 4.3%
6 6/27 45188 1475.369 4.3%
Total 321433 34152.87 100.0%
SONICWALL
SonicWALL ViewPoint
Version 2.8

5. The bar graph displays the amount of bandwidth transferred during each day of the specified time period.
6. The table contains the following information:
   - **Date**—when the sample was taken.
   - **Connections**—number of hits.
   - **MBytes**—number of megabytes transferred.
   - **% of Usage**—percentage of megabytes transferred during this day, compared to the time period. For example, if 100,000 megabytes of data was transferred during the time period and 25,000 megabytes was transferred on one day, the **% of Usage** field will display 25%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears.

Figure 39: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.

9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

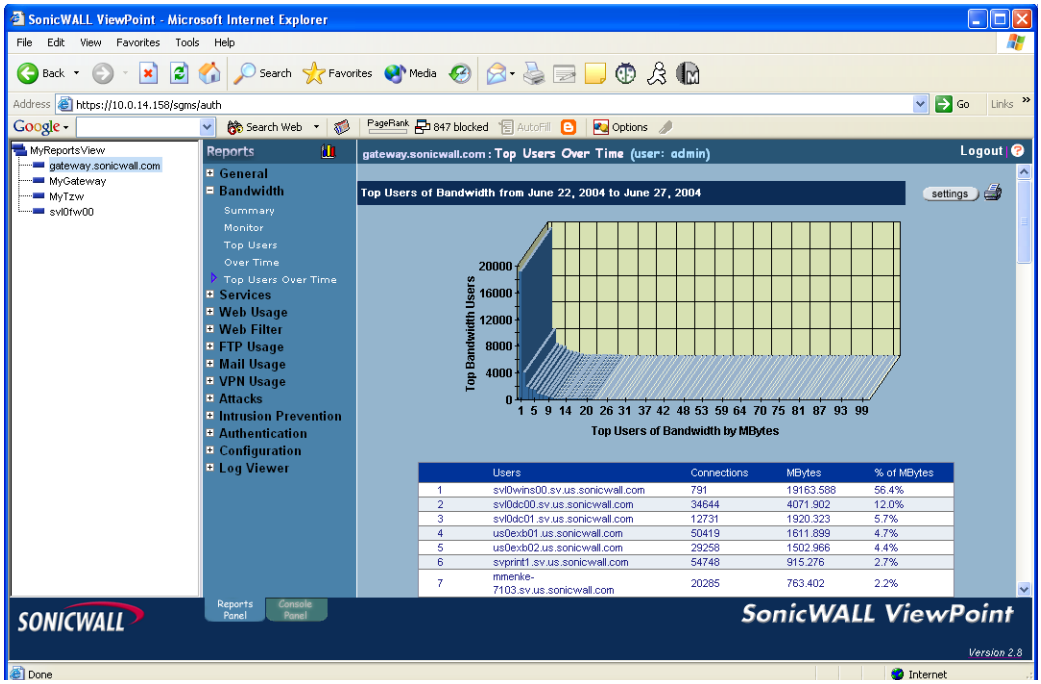
Viewing the Top Users of Bandwidth Over Time

The Top Users report displays the users who used the most bandwidth on the specified date.

To view the Top Users Over Time report, follow these steps:

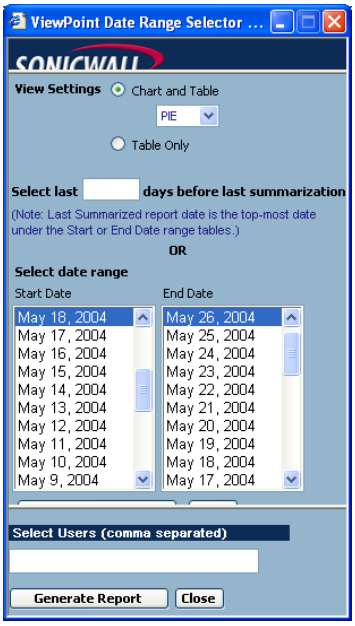
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Bandwidth tree and click **Top Users Over Time**. The Top Users Over Time page appears (Figure 40).

Figure 40: Top Users Over Time Page



5. The pie chart displays the percentage of bandwidth transferred by each user.
6. The table contains the following information:
   - **Users**—the IP address of the user.
   - **Connections**—number of events or "hits."
   - **MBytes**—number of megabytes.
   - **% of MBytes—**percentage of megabytes transferred by this user, compared to all users. For example, if 1000 megabytes of data was transferred during this period and 200 megabytes was transferred by the top user, the **% of MBytes** field will display 20%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears.

Figure 41: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.
9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. To display a limited group of users, enter the user IDs in the **Select Users** field and separate each entry with a comma.

    Note: *This field does not use pattern matching. For example, "john" will not match john_smith, john42, or big_john.*
11. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

Viewing Service Usage Reports

Service reports provide information on the amount of data transmitted through the selected SonicWALL appliance by each service.

Service reports are useful for revealing inappropriate usage of bandwidth and can help determine network policies. For example, if there is a large spike of bandwidth usage, you can determine whether this is caused by regular web access, someone using FTP to transfer large files, an attempted Denial of Service (DoS) attack, or another service.

Note: *All reports appear in the Firewall's time zone.*

SonicWALL ViewPoint can monitor known services as well as custom services. To add a service to monitor, see "Adding a Service" on page 52.

Select from the following:

- To view service bandwidth usage in real time, see "Monitoring Service Usage in Real Time" on page 50.
- To view a summary of the daily service bandwidth usage, see "Viewing the Services Summary Report" on page 51.

Note: *You cannot view services reports from the global or group view.*

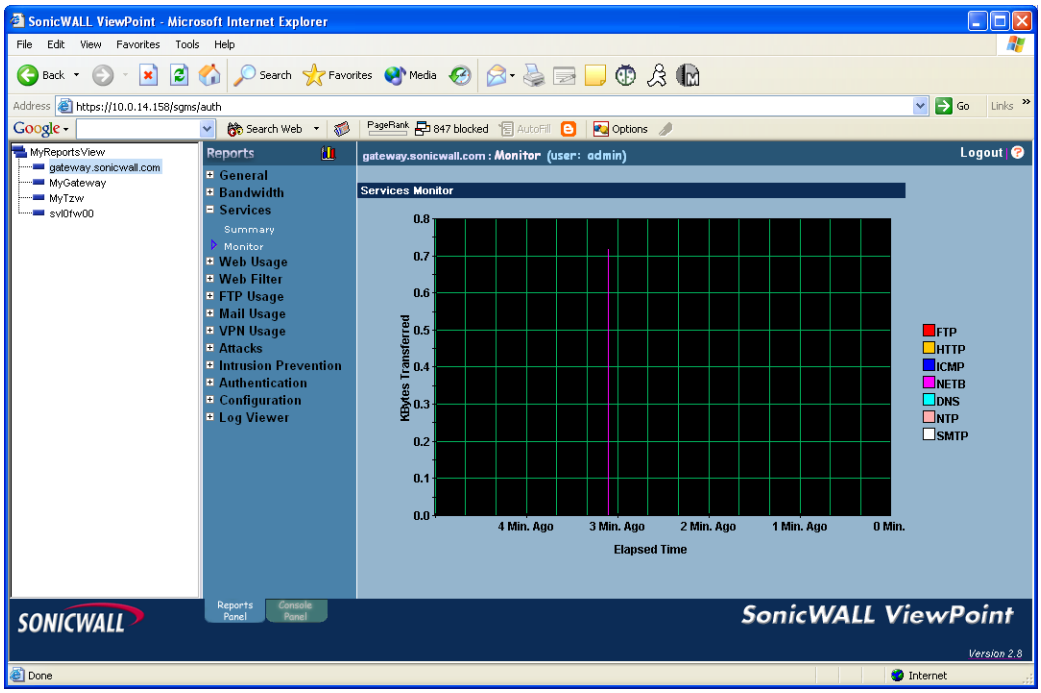
Monitoring Service Usage in Real Time

The Services Monitor displays service usage for the selected SonicWALL appliance in real time.

To view the Service Monitor, follow these steps:

1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Services tree and click **Monitor**. The Monitor page appears (Figure 42).

Figure 42: Monitor Page



5. The Services Monitor shows the amount of data transferred for each service during each sampling period for the last five minutes. The sampling period is 15 seconds.

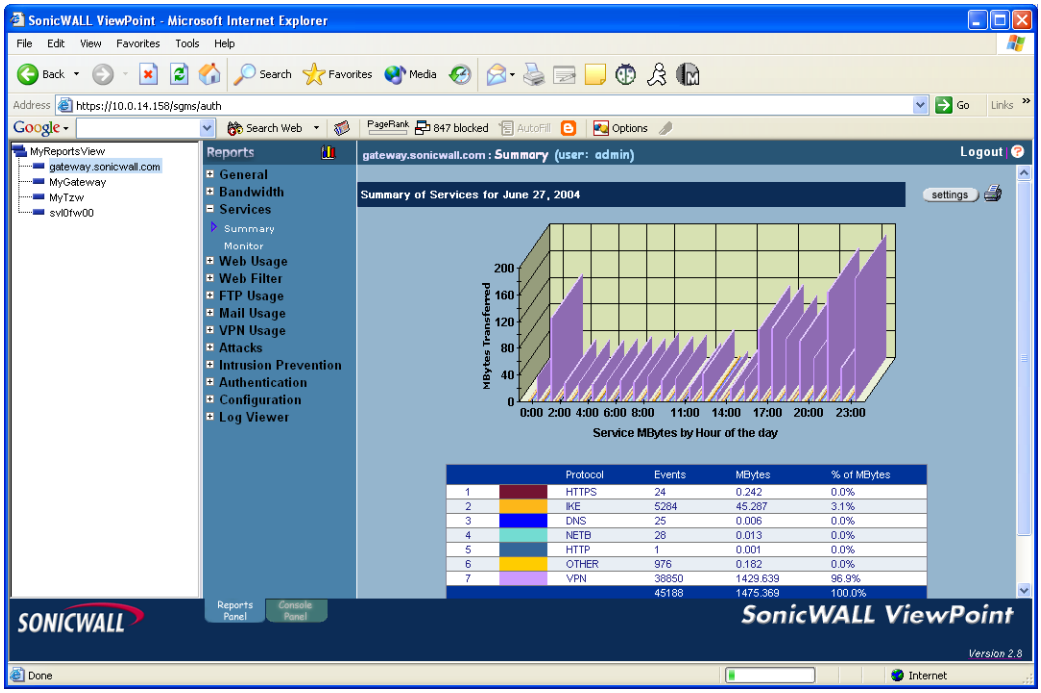
Viewing the Services Summary Report

The Services Summary report displays the amount of traffic handled by each service during each hour of the specified day.

To view the Services Summary report, follow these steps:

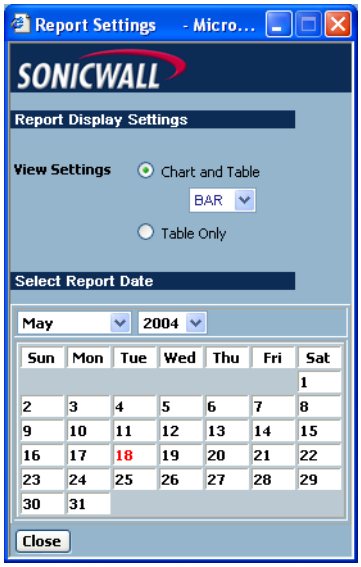
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Services tree and click **Summary**. The Summary page appears (Figure 43).

Figure 43: Summary Page



5. The bar graph displays the amount of bandwidth used by each service during each hour of the day.
6. The table contains the following information:
   - **Protocol**—the service.
   - **KBytes**—number of kilobytes.
   - **Events**—number of events or "hits."
   - **% of Events**—percentage of events transferred by this service on the selected day, compared to all other services. For example, if 10,000 events occurred during the day and 9,000 of the events were handled by the HTTP service, the **% of Events** field will display 90%.
7. SonicWALL ViewPoint shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 44).

Figure 44: Report Settings Dialog Box



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

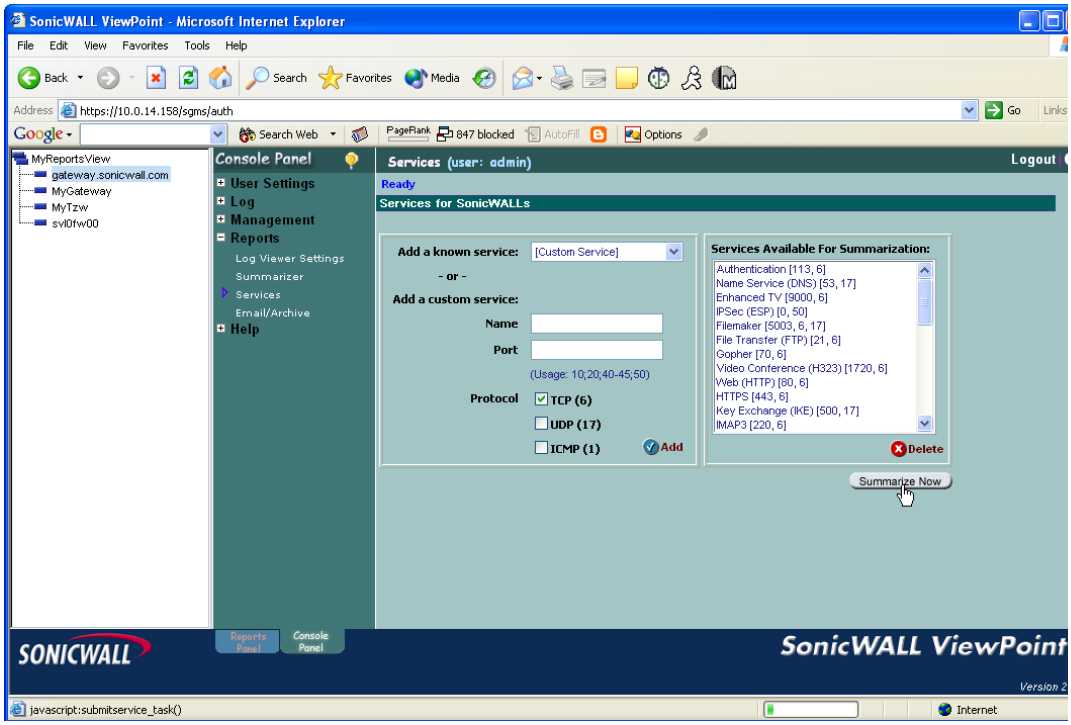
    Note: *These settings will stay in effect for all similar reports during your active login session.*

Adding a Service

SonicWALL ViewPoint can monitor known services or custom services. To add a service that will be displayed in all future service reports, follow these steps.

1. Start and log into SonicWALL ViewPoint.
2. Click the **Console** tab.
3. Expand the Reports tree and click **Services**. The Services page appears (Figure 45)

Figure 45: .Services Page



4. To add a known service, select it from the **Known Services** list box and click **Add**.
5. To add a custom service, enter a name in the **Name** field, enter the service's port range, and select the protocols that it uses from the **Protocol** list box. Then, click **Add**.
6. To delete a service, select it and click **Delete**.

Viewing Web Usage Reports

Web usage reports provide information on the amount of web usage that occurs through the selected SonicWALL appliance(s).

Web usage reports can be used to view web bandwidth usage by the hour, day, or over a period of days. Additionally, you can view the top users of web bandwidth and view the most visited sites.

Note: *All reports appear in the Firewall's time zone.*

Select from the following:

- To view a summary of the daily web bandwidth usage, see "Viewing the Web Usage Summary Report" on page 54.
- To view a list of the top visited sites, see "Viewing the Top Web Sites" on page 56.
- To view the users who consume the most web bandwidth, see "Viewing the Top Users of Web Bandwidth" on page 57.
- To view the top sites visited by each user, see "Viewing Web Usage by User" on page 59.
- To view the top sites and the users who visited the sites, see "Viewing Web Usage by Site" on page 61.
- To view web bandwidth usage over a period of time, see "Viewing Web Usage Over Time" on page 62.
- To view a list of the top visited sites over time, see "Viewing Top Sites Over Time" on page 64.
- To view the users who consume the most web bandwidth over time, see "Viewing Top Users Over Time" on page 65.
- To view the sites that consume the most web bandwidth over time, see "Viewing Top Sites Over Time" on page 64.
- To view the top sites visited by each user over time, see "Viewing Bandwidth Usage By User Over Time" on page 67.

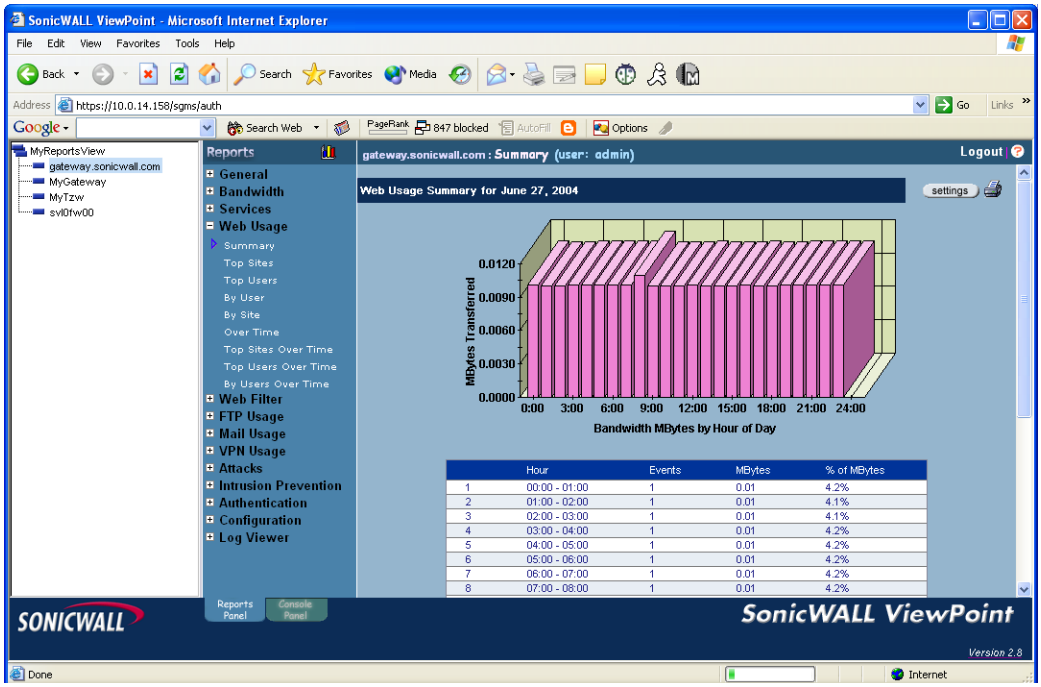
Viewing the Web Usage Summary Report

The Web Usage Summary report contains information on the amount of HTTP bandwidth handled by a SonicWALL appliance or group of SonicWALL appliances during each hour of the specified day.

To view the Web Usage Summary report, follow these steps:

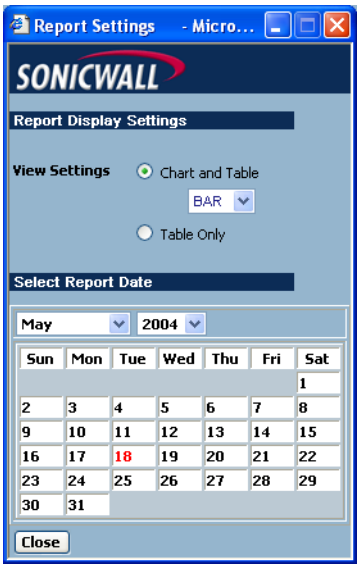
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Web Usage tree and click **Summary**. The Summary page appears (Figure 46).

Figure 46: Summary Page


SonicWALL ViewPoint - Microsoft Internet Explorer
gateway.sonicwall.com : Summary (user: admin)
Logout
Web Usage Summary for June 27, 2004
settings
MBytes Transferred
0.0120
0.0090
0.0060
0.0030
0.0000
0:00 3:00 6:00 9:00 12:00 15:00 18:00 21:00 24:00
Bandwidth MBytes by Hour of Day
Hour Events MBytes % of MBytes
1 00:00 - 01:00 1 0.01 4.2%
2 01:00 - 02:00 1 0.01 4.1%
3 02:00 - 03:00 1 0.01 4.1%
4 03:00 - 04:00 1 0.01 4.2%
5 04:00 - 05:00 1 0.01 4.2%
6 05:00 - 06:00 1 0.01 4.2%
7 06:00 - 07:00 1 0.01 4.2%
8 07:00 - 08:00 1 0.01 4.2%
SONICWALL
SonicWALL ViewPoint
Version 2.8

5. The bar graph displays the amount of HTTP bandwidth transferred during each hour of the day.
6. The table contains the following information:
   - **Hour**—when the sample was taken.
   - **Events**—number of events or "hits."
   - **MBytes**—number of megabytes transferred.
   - **% of MBytes**—percentage of megabytes transferred during this hour, compared to the day. For example, if 1000 megabytes of HTTP data was transferred during the day and 100 megabytes was transferred at the 12:00 time period, the **% of MBytes** field will display 10%.
7. SonicWALL ViewPoint shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 47).

Figure 47: Report Settings Dialog Box



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view.

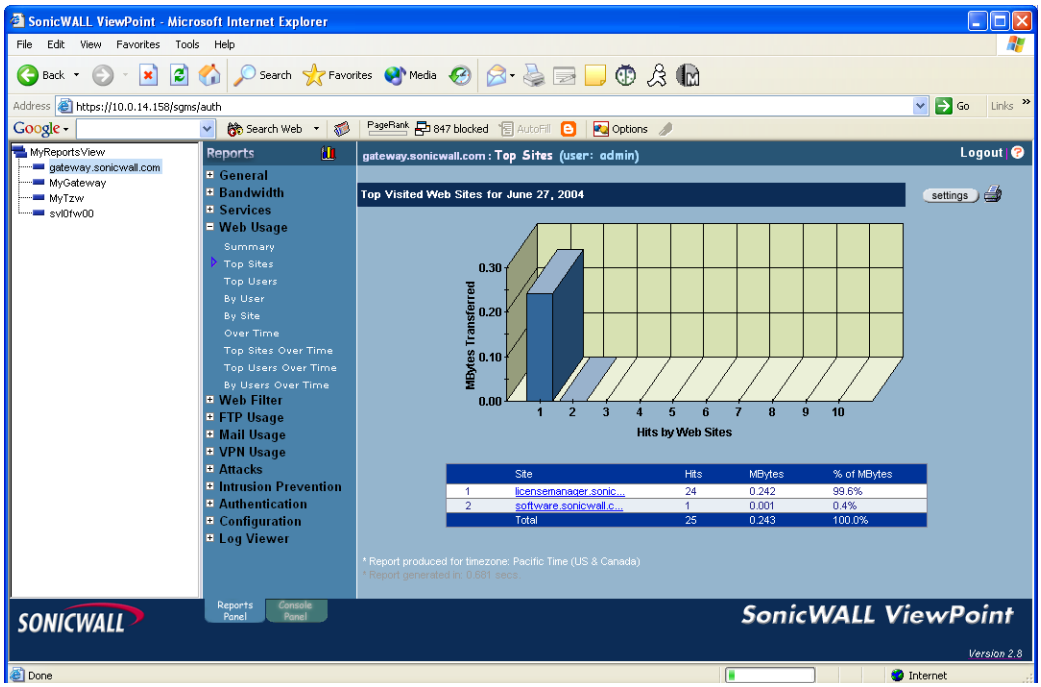
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

Viewing the Top Web Sites

The Top Sites report displays the web sites that used the most HTTP bandwidth on the specified date. To view the Top Sites report, follow these steps:

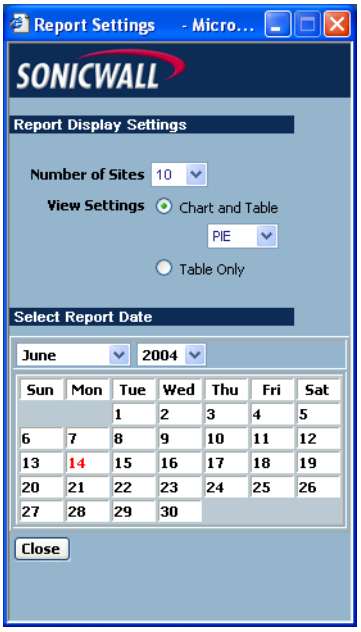
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Usage tree and click **Top Sites**. The Top Sites page appears (Figure 48).

Figure 48: Top Sites Page



5. The pie chart displays the percentage of bandwidth used to access the top sites.
6. The table contains the following information:
   - **Site**—URL or IP address of the site.
   - **Hits**—number of hits.
   - **MBytes**—number of megabytes transferred.
   - **% of MBytes**—percentage of megabytes transferred between this site, compared to all other HTTP traffic. For example, if 10,000 megabytes of data was transferred during the day and 5,000 megabytes was transferred between the appliance and Ebay, the **% of MBytes** field will display 50% and you have a problem.
7. By default, SonicWALL ViewPoint shows today's report, a pie chart, and the ten top sites. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 49).

Figure 49: Report Settings Dialog Box



8. Select the number of sites that will be displayed from the **Number of Sites** list box.
9. Select whether to display a chart and table or a table only.
10. Select the year, month, and day that you would like to view.
11. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

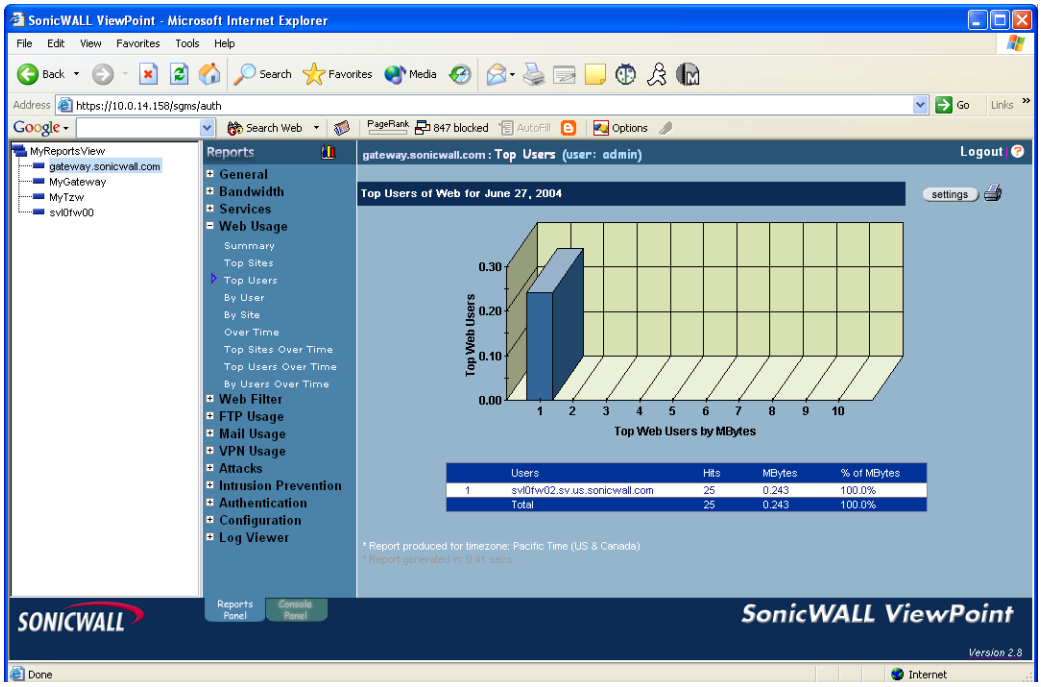
Viewing the Top Users of Web Bandwidth

The Top Users report displays the users who used the most HTTP bandwidth on the specified date.

To view the Top Users report, follow these steps:

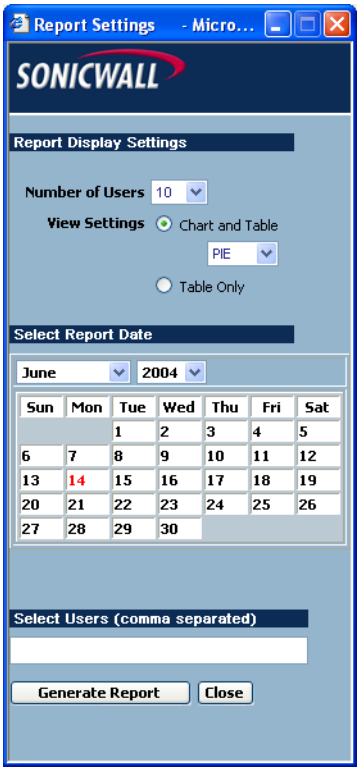
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Usage tree and click **Top Users**. The Top Users page appears (Figure 50).

Figure 50: Top Users Page



5. The pie chart displays the percentage of bandwidth transferred by each of the top users.
6. The table contains the following information:
   - **Users**—the IP address of the user.
   - **Hits**—number of hits.
   - **MBytes**—number of megabytes transferred.
   - **% of MBytes**—percentage of megabytes transferred by this user, compared to all users. For example, if 1000 megabytes of data was transferred during the day and 200 megabytes was transferred by the top user, the **% of MBytes** field will display 20%.
7. By default, SonicWALL ViewPoint shows today's report, a pie chart, and the ten top users. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 51).

Figure 51: Report Settings Dialog Box



8. Select the number of users that will be displayed from the **Number of Users** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.
11. To display a limited group of users, enter the user IDs in the **Select Users** field and separate each entry with a comma.

    Note: *This field does not use pattern matching. For example, "john" will not match john_smith, john42, or big_john.*
12. When you are finished, click **Close.** SonicWALL ViewPoint refreshes the report based on the selected settings.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

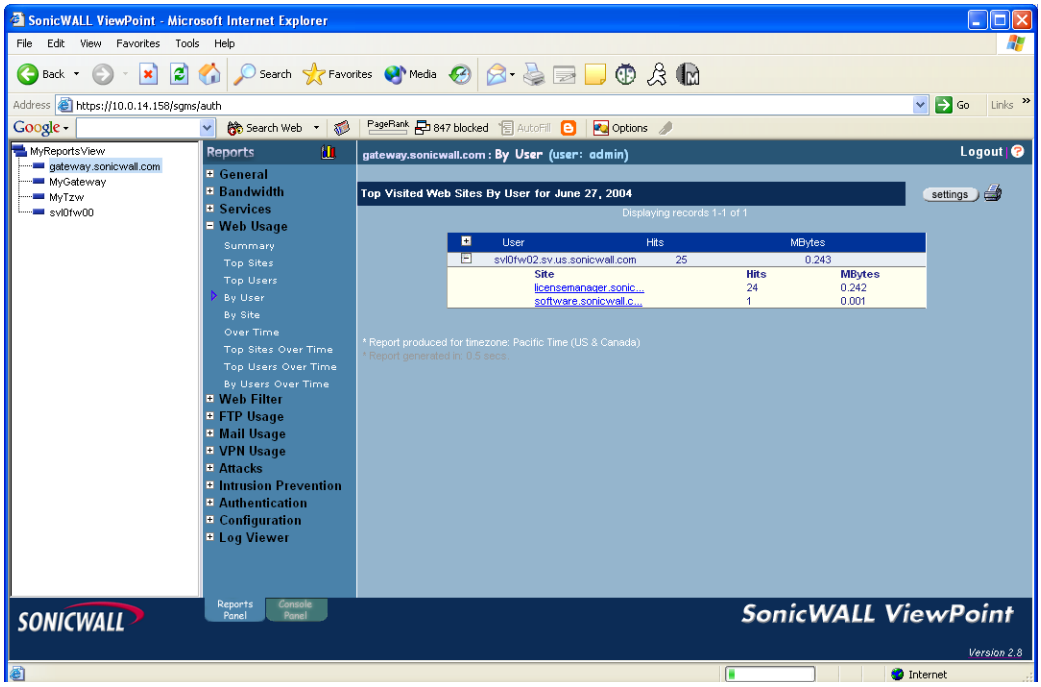
Viewing Web Usage by User

The By User report displays a list of all users, their top sites, the number of hits to each site, and the amount of data transferred.

To view the By User report, follow these steps:

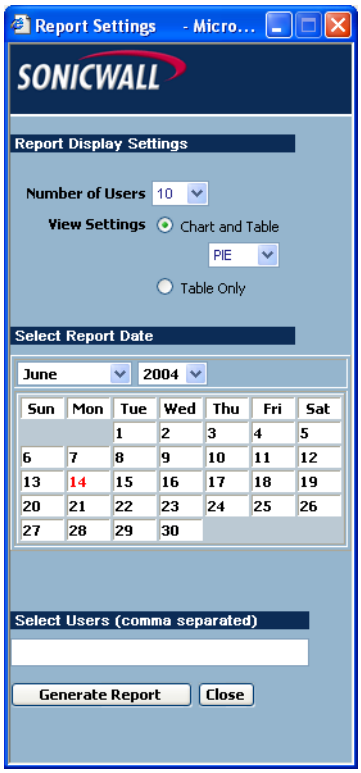
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Usage tree and click **By User**. The By User page appears (Figure 52).

Figure 52: By User Page



5. The table contains the following information:
   - **User**—the IP address of the user.
   - **Hits**—number of hits to each web site visited by the user.
   - **MBytes**—number of megabytes transferred.
6. To change the display settings, click **Settings**. The Report Settings dialog box appears (Figure 53).

Figure 53: Report Settings Dialog Box



7. Select the number of users that will be displayed from the **Number of Users** list box.

8. Select the type of chart from the **Chart Type** list box.
9. Select the year, month, and day that you would like to view.
10. To display a limited group of users, enter the user IDs in the **Select Users** field and separate each entry with a comma.

    Note: *This field does not use pattern matching. For example, "john" will not match john_smith, john42, or big_john.*

11. When you are finished, click **Close.** SonicWALL ViewPoint refreshes the report based on the selected settings.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

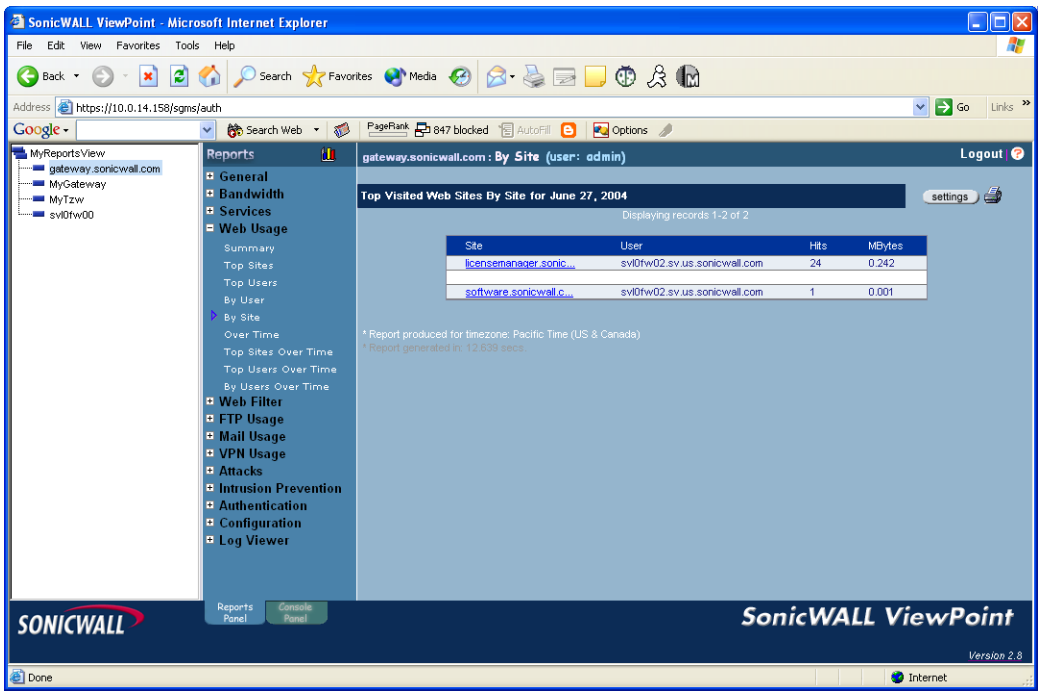
Viewing Web Usage by Site

The By Site report displays a list of all sites, the users that accessed the sites, the number of hits to each site, and the amount of data transferred.

To view the By Site report, follow these steps:

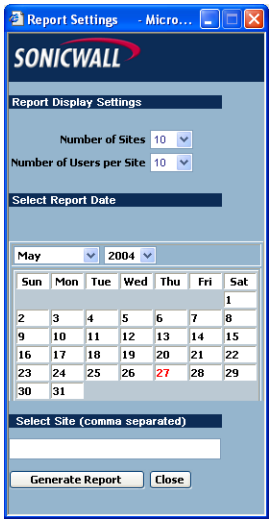
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Usage tree and click **By Site**. The By Site page appears (Figure 54).

Figure 54: By Site Page



5. The table contains the following information:
   - **Site**—the URL of the site.
   - **User**—the top users that visited the site (default: 10).
   - **Hits**—number of hits to the web site, by user.
   - **MBytes**—number of megabytes transferred, by user.
6. SonicWALL ViewPoint shows today's report and all web sites. To change the date of the report or web sites displayed, click **Settings**. The Report Settings dialog box appears.

Figure 55: Report Settings Dialog Box



7. Select the number of sites that will be displayed from the **Number of Sites** list box.
8. Select the number of users that will be displayed per site from the **Number of Users per Site** list box.
9. To only display a limited set of web sites, enter the URLs in the **Select Site** field and separate each entry with a comma.

   Note: *This field does not use pattern matching. For example, "www.yahoo.com" will not match yahoo.com, mail.yahoo.com, or shopping.yahoo.com.*
10. When you are finished, click **Close.** SonicWALL ViewPoint adjusts the report for the selected day and settings.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

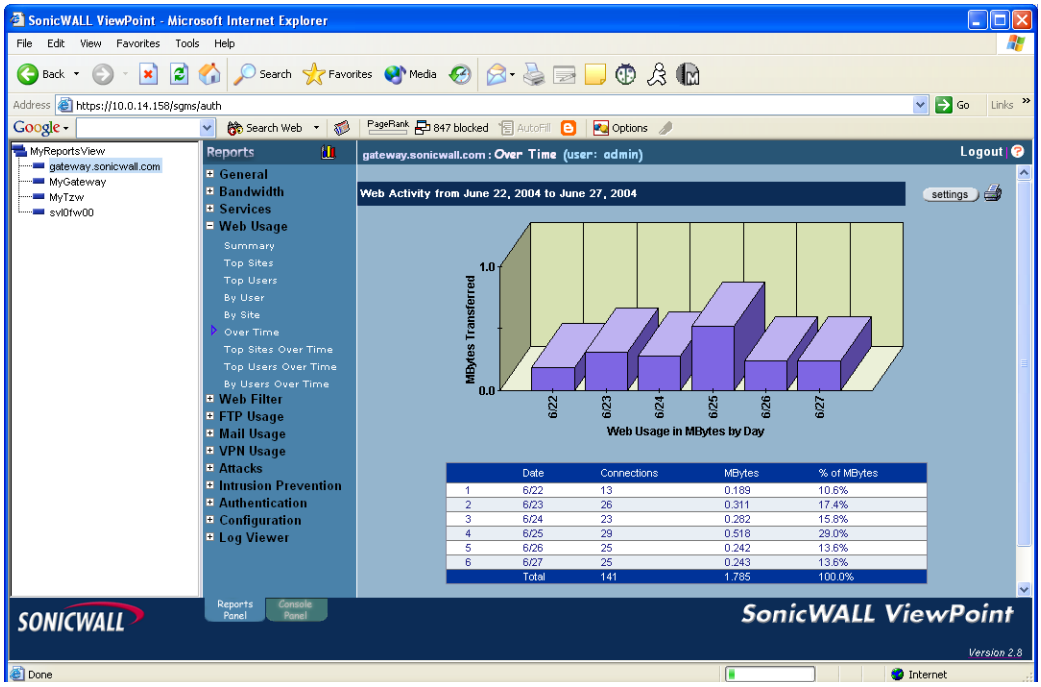
Viewing Web Usage Over Time

The Web Usage Over Time report displays the daily amount of HTTP bandwidth handled by a SonicWALL appliance or group of SonicWALL appliances for the specified time period.

To view the Web Usage Over Time report, follow these steps:

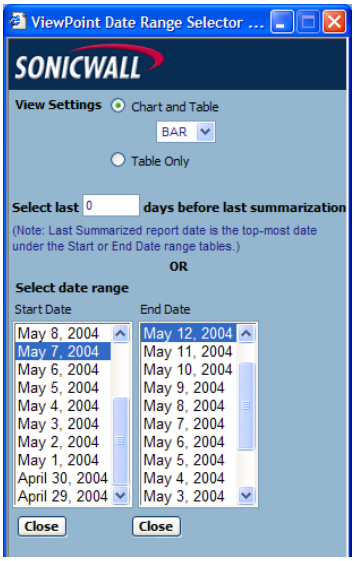
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Web Usage tree and click **Over Time**. The Over Time page appears (Figure 56).

Figure 56: Over Time Page



5. The bar graph displays the amount of HTTP bandwidth transferred during each day of the specified time period.
6. The table contains the following information:
   - **Date**—when the sample was taken.
   - **Connections**—number of connections or hits.
   - **MBytes**—number of megabytes transferred.
   - **% of Usage**—percentage of megabytes transferred during this day, compared to the time period. For example, if 100,000 megabytes of data was transferred during the time period and 25,000 megabytes was transferred on one day, the **% of Usage** field will display 25%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 57).

Figure 57: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.

9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

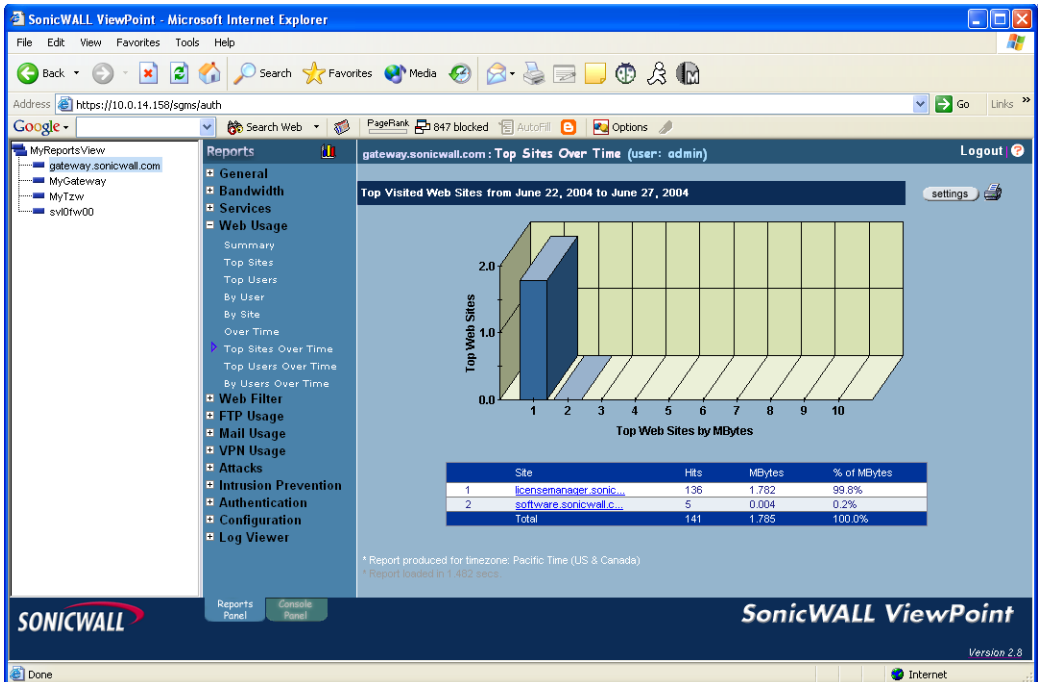
Viewing Top Sites Over Time

The Top Sites Over Time report displays the most visited web sites for the specified time period.

To view the Top Sites Over Time report, follow these steps:

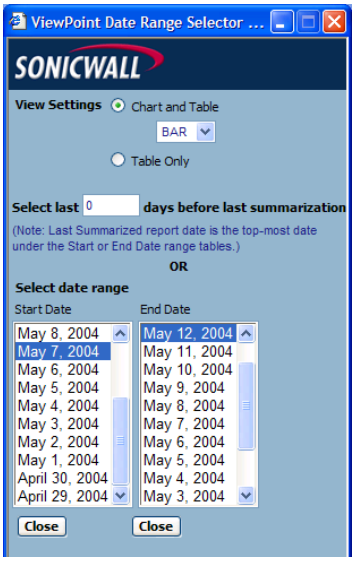
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Usage tree and click **Top Sites Over Time**. The Top Sites Over Time page appears (Figure 58).

Figure 58: Top Sites Over Time Page



5. The bar graph displays the amount of HTTP bandwidth transferred during each day of the specified time period.
6. The table contains the following information:
   - **Site**—URL or IP address of the site.
   - **Hits**—number of hits.
   - **KBytes**—number of kilobytes transferred.
   - **% of KBytes**—percentage of kilobytes transferred between this site, compared to all other HTTP traffic. For example, if 1,000,000 kilobytes of data was transferred during the day and 500,000 kilobytes was transferred between the appliance and Ebay, the **% of KBytes** field will display 50% and you have a problem.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 59).

Figure 59: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.
9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

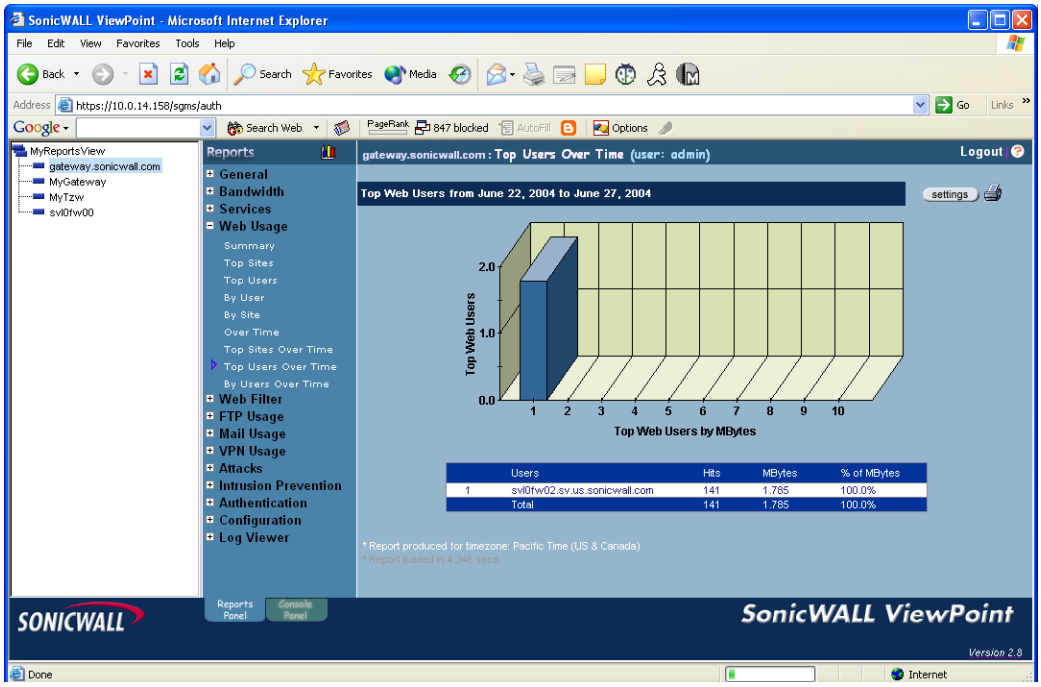
    Note: *These settings will stay in effect for all similar reports during your active login session.*

Viewing Top Users Over Time

The Top Users Over Time report displays the top users of bandwidth for the specified time period. To view the Top Users Over Time report, follow these steps:

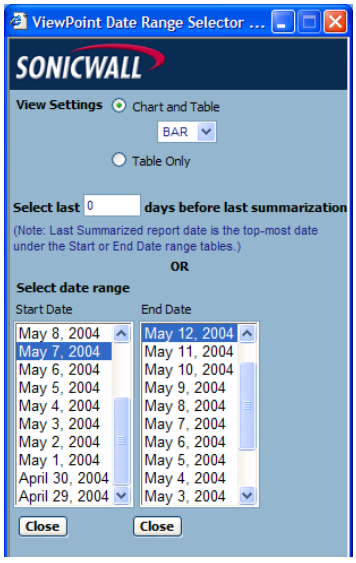
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Usage tree and click **Top Users Over Time**. The Top Users Over Time page appears (Figure 60).

Figure 60: Top Users Over Time Page



5. The graph provides a graphical display of the percentage of bandwidth transferred by each of the top users over the specified time period.
6. The table contains the following information:
   - **Users**—the IP address of the user.
   - **Hits**—number of hits.
   - **MBytes**—number of megabytes transferred.
   - **% of MBytes**—percentage of megabytes transferred by this user, compared to all users. For example, if 1000 megabytes of data was transferred during the period and 200 megabytes was transferred by the top user, the **% of MBytes** field will display 20%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 61).

Figure 61: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.

9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

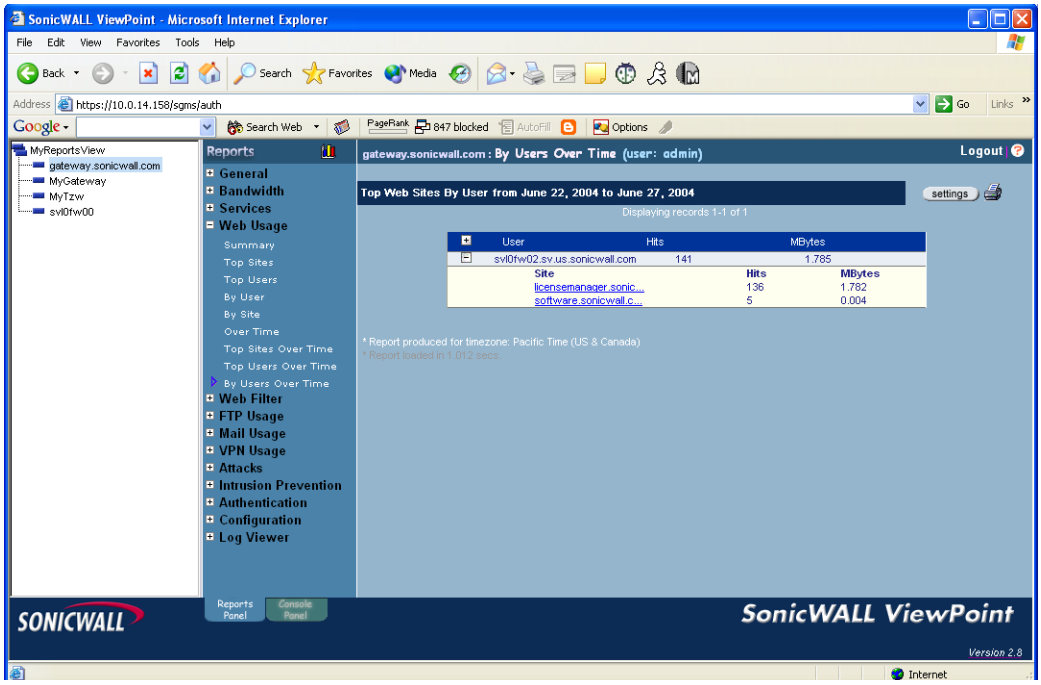
Viewing Bandwidth Usage By User Over Time

The By User Over Time report displays a list of all users, their top sites, the number of hits to each site, and the amount of data transferred for the specified time period.

To view the By User Over Time report, follow these steps:

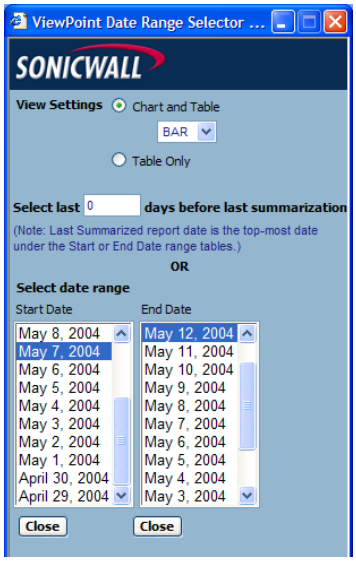
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Usage tree and click **By User Over Time**. The By User Over Time page appears (Figure 62).

Figure 62: By User Over Time Page



5. The table contains the following information:
   - User—the IP address of the user.
   - Site—the top five sites visited by the user.
   - Hits—number of hits to each web site visited by the user.
   - KBytes—number of kilobytes transferred.
6. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 63).

Figure 63: Report Settings Dialog Box



7. Select whether to display a chart and table or a table only.
8. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
9. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

   Note: *These settings will stay in effect for all similar reports during your active login session.*

Viewing Web Filter Reports

Web filter reports provide information on the number of attempts that users made to access blocked web sites through the selected SonicWALL appliance(s). These reports include web sites blocked by the Content Filter List, customized keyword filtering, and domain name filtering.

Web filter reports can be used to view blocked site access attempts by the hour, day, or over a period of days. Additionally, you can view the users that most frequently attempt to access blocked sites and the most popular blocked sites.

Note: *All reports appear in the Firewall's time zone.*

Select from the following:

- To view a summary of the blocked site access attempts, see "Viewing the Web Filter Summary Report" on page 69.
- To view a list of the blocked sites that users attempted to access most often, see "Viewing the Web Filter Top Sites Report" on page 71.
- To view the users who made the most attempts to access blocked sites, see "Viewing the Top Users that Try to Access Blocked Sites" on page 72.
- To view the top blocked sites that each user attempted to access, see "Viewing the Top Blocked Sites for Each User" on page 74.
- To view blocked site access attempts over a period of time, see "Viewing Blocked Site Attempts Over Time" on page 75.
- To view a list of the blocked sites that users attempted to access most often over time, see "Viewing Blocked Site Attempts Over Time" on page 75.
- To view the users who made the most attempts to access blocked sites over time, see "Viewing the Top Blocked Site Users Over Time" on page 78.
- To view the top blocked sites that each user attempted to access over time, see "Viewing the Top Blocked Sites for Each User Over Time" on page 80.

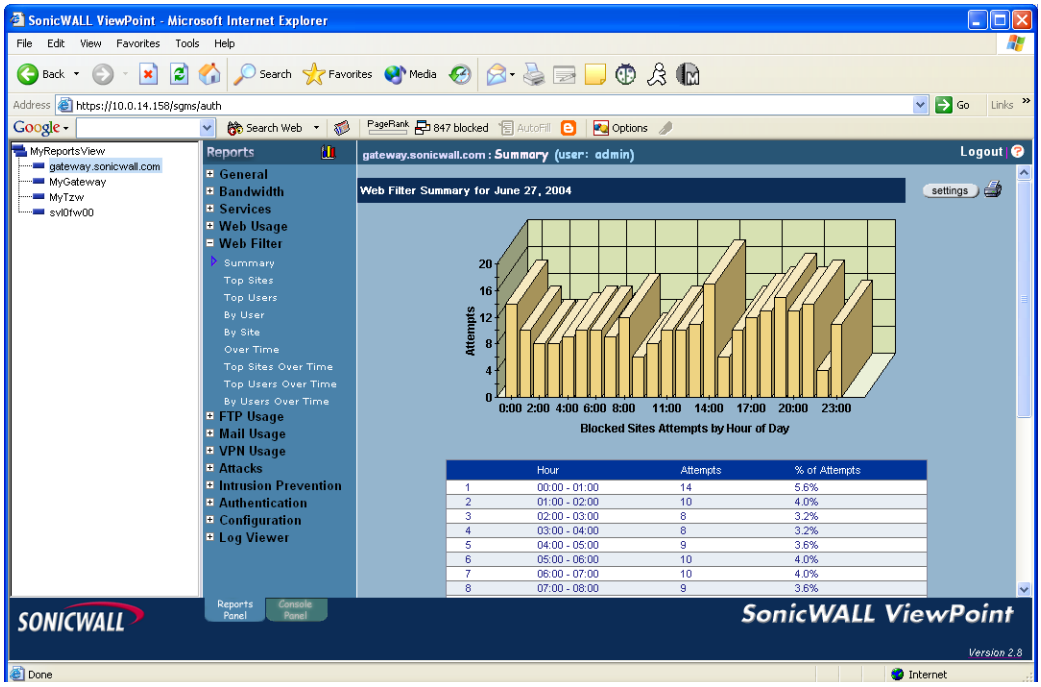
Viewing the Web Filter Summary Report

The Web Filter Summary report contains information on the number of times users attempt to access blocked sites for the specified day.

To view the Web Filter Summary report, follow these steps:

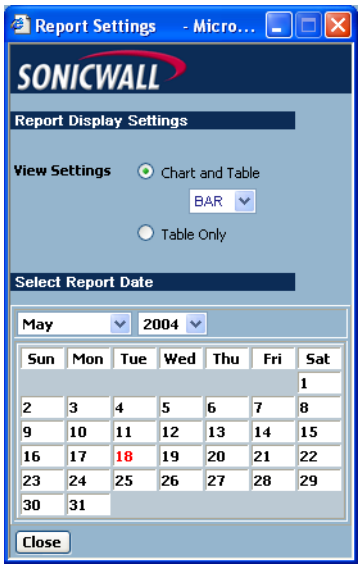
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Web Filter tree and click **Summary**. The Summary page appears (Figure 64).

Figure 64: Summary Page



5. The bar graph displays the number of blocked sites that users attempted to access during each hour of the day.
6. The table contains the following information:
   - **Hour**—time when the sample was taken.
   - **Attempts**—number of attempts to access blocked sites.
   - **% of Attempts**—percentage of attempts during this hour, compared to the day. For example, if 100 attempts occurred during the day and 20 attempts occurred at the 12:00 time period, the **% of Attempts** field will display 20%.
7. SonicWALL ViewPoint shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 65).

Figure 65: Report Settings Dialog Box



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

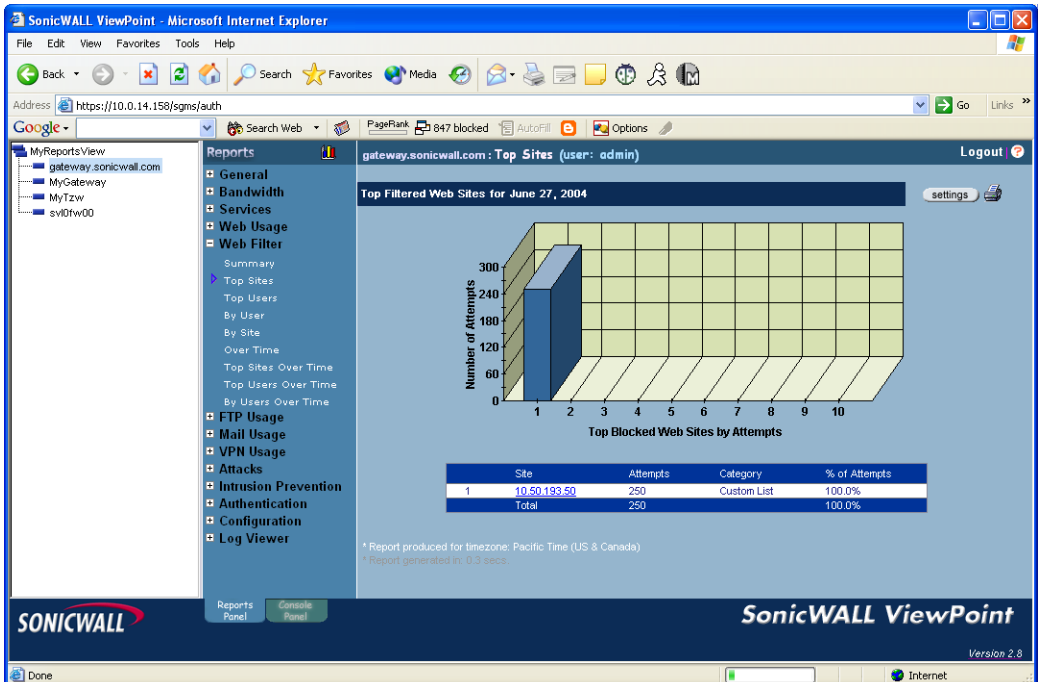
Viewing the Web Filter Top Sites Report

The Web Filter Top Sites report displays the top blocked web sites that users attempted to access on the specified date.

To view the Top Sites report, follow these steps:

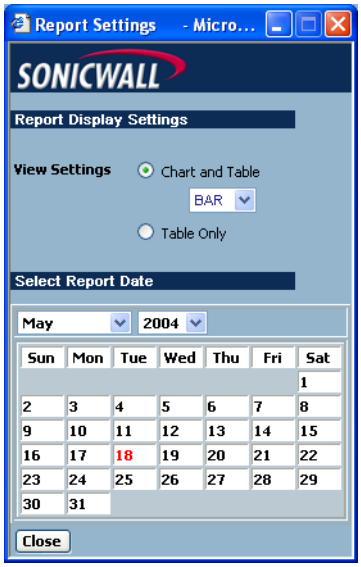
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Filter tree and click **Top Sites**. The Top Sites page appears (Figure 66).

Figure 66: Top Sites Page



5. The graph provides a display of the number of access attempts for each of the top twenty blocked web sites.
6. The table contains the following information:
   - **Site**—URL or IP address of the site.
   - **Attempts**—number of attempts.
   - **% of Attempts**—percentage of attempts to access the blocked site, compared to all other blocked site attempts. For example, if 500 attempts were made during the day and 100 of those attempts were for www.badsite.com, its **% of Attempts** field will display 20%.
7. SonicWALL ViewPoint shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 67).

Figure 67: Report Settings Dialog Box



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

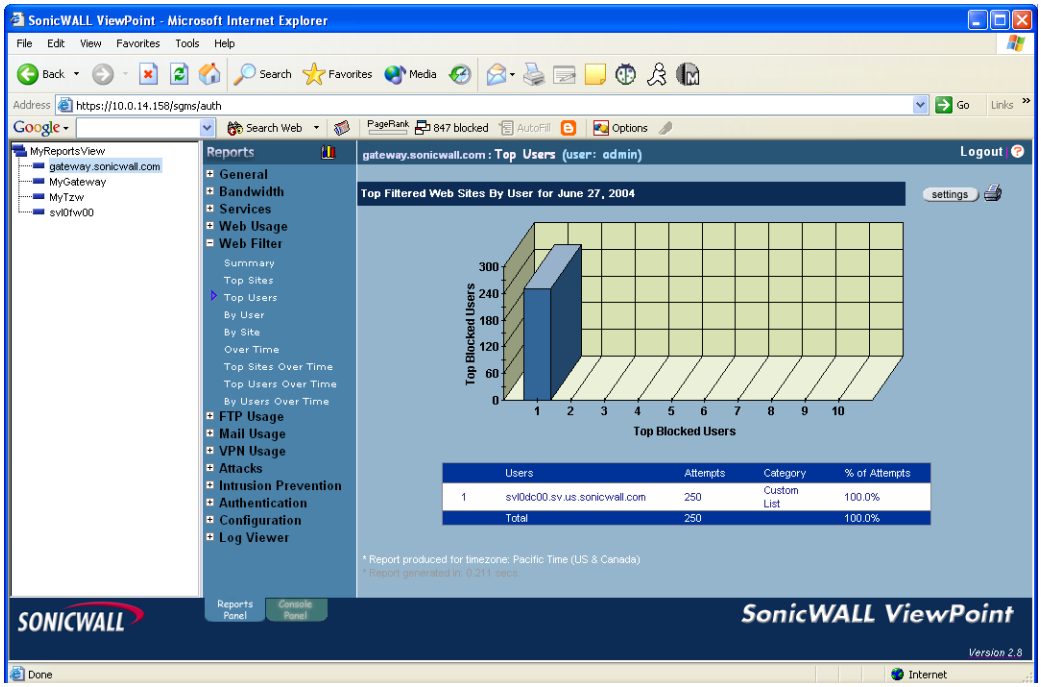
Viewing the Top Users that Try to Access Blocked Sites

The Web Filter Top Users report displays the users who made the most attempts to access blocked sites on the specified date.

To view the Top Users report, follow these steps:

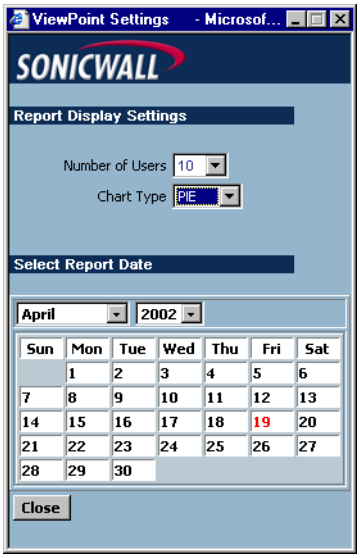
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Filter tree and click **Top Users**. The Top Users page appears (Figure 68).

Figure 68: Top Users Page



5. The pie chart displays the top users with the most blocked site attempts.
6. The table contains the following information:
   - **Users**—the IP address of the user.
   - **Attempts**—number of attempts.
   - **% of Attempts**—percentage of attempts to access the blocked site, compared to all other user attempts. For example, if 500 attempts were made during the day and 250 of those attempts were made by a single user, his **% of Attempts** field will display 50%.
7. By default, SonicWALL ViewPoint shows today's report, a pie chart, and the ten top users. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 69).

Figure 69: Report Settings Dialog Box



8. Select the number of users that will be displayed from the **Number of Users** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.

11. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

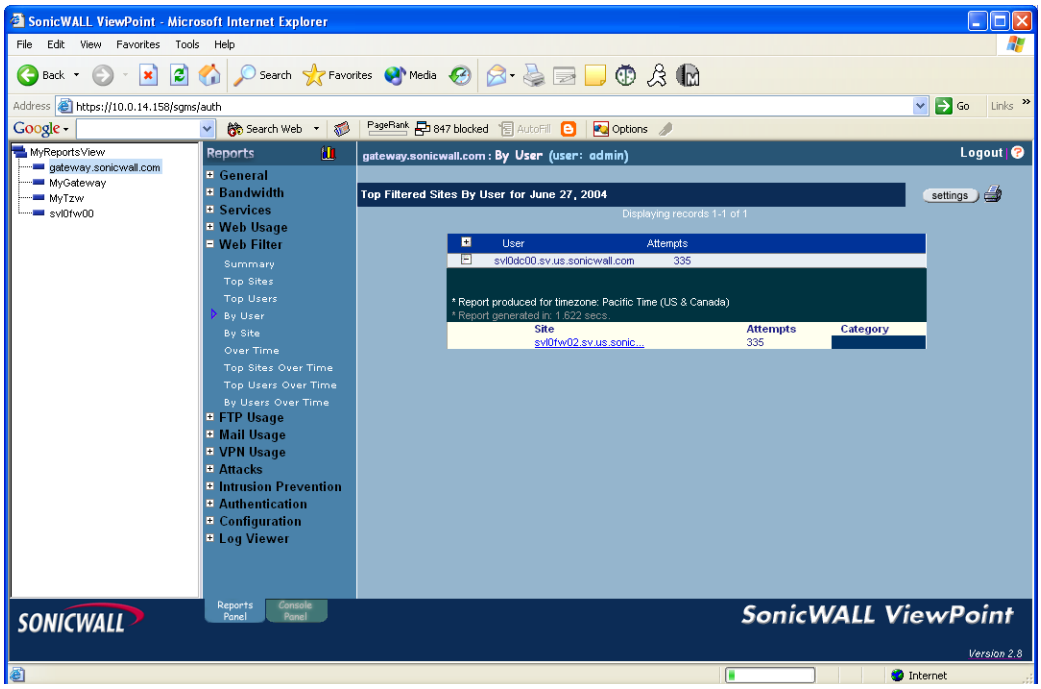
Viewing the Top Blocked Sites for Each User

The Web Filter By User report displays the top blocked web sites that each user attempted to access on the specified date.

To view the Web Filter By User report, follow these steps:

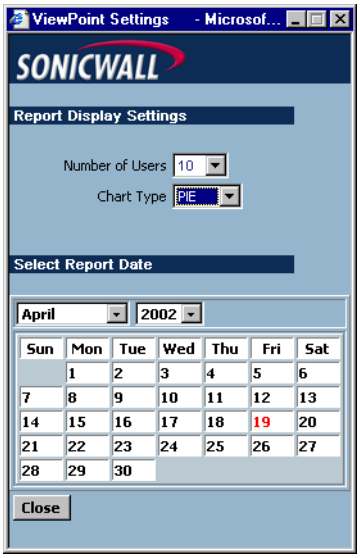
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Filter tree and click **By User**. The By User page appears (Figure 70).

Figure 70: By User Page



5. The table contains the following information:
   - User—the IP address of the user.
   - Site—the top five sites visited by the user.
   - Attempts—number of attempts the user made to access each web site.
6. By default, SonicWALL ViewPoint shows today's report, a pie chart, and the ten top users. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 71).

Figure 71: Report Settings Dialog Box


ViewPoint Settings - Microsof...
SONICWALL
Report Display Settings
Number of Users 10
Chart Type PIE
Select Report Date
April 2002
Sun Mon Tue Wed Thu Fri Sat
1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30
Close

7. Select the number of users that will be displayed from the **Number of Users** list box.
8. Select the type of chart from the **Chart Type** list box.
9. Select the year, month, and day that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

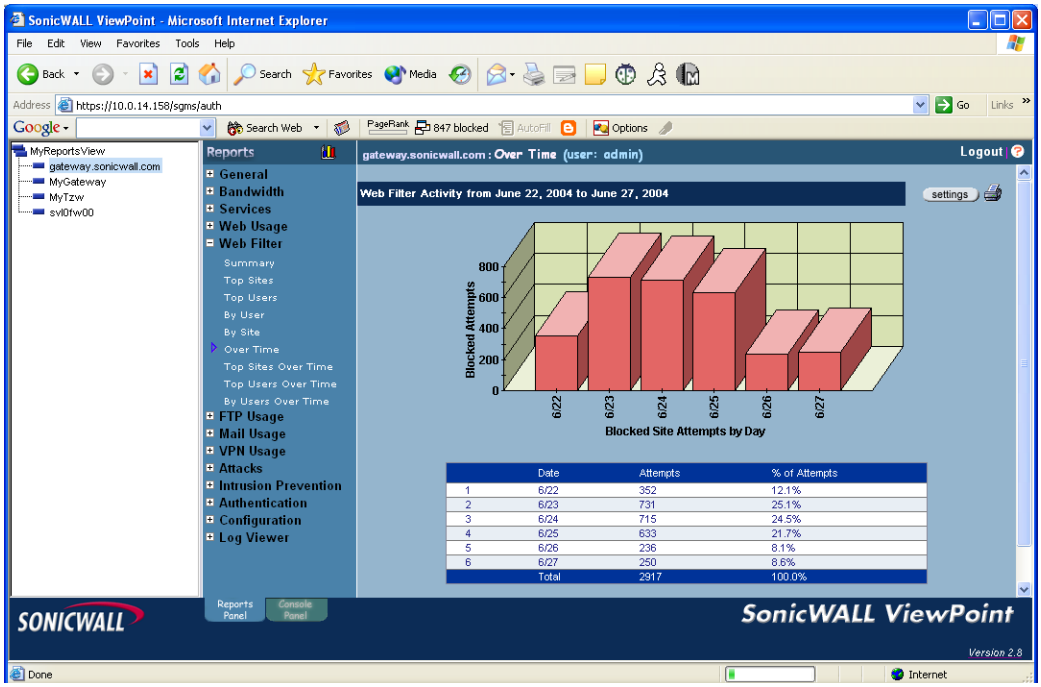
Viewing Blocked Site Attempts Over Time

The Web Filter Over Time report displays the number of attempts that were made to access blocked web sites for the specified time period.

To view the Web Filter Over Time report, follow these steps:

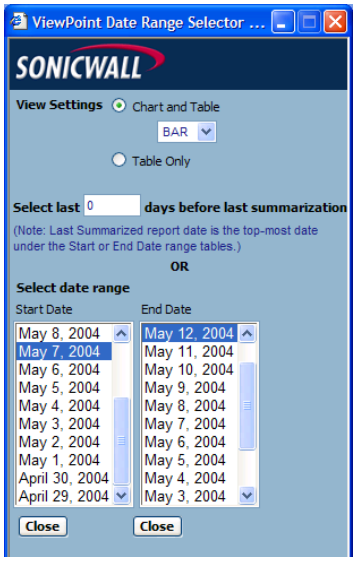
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Web Filter tree and click **Over Time**. The Over Time page appears (Figure 72).

Figure 72: Over Time Page



5. The bar graph displays the number of attempts that were made to access blocked web sites during each day of the specified time period.
6. The table contains the following information:
   - **Date**—day when the sample was taken.
   - **Attempts**—number of attempts to access blocked web sites.
   - **% of Attempts**—percentage of attempts to access the blocked site on the day, compared to the time period. For example, if 5,000 attempts were made during the time period and 500 were made on one day, its **% of Attempts** field will display 10%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 73).

Figure 73: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.

9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

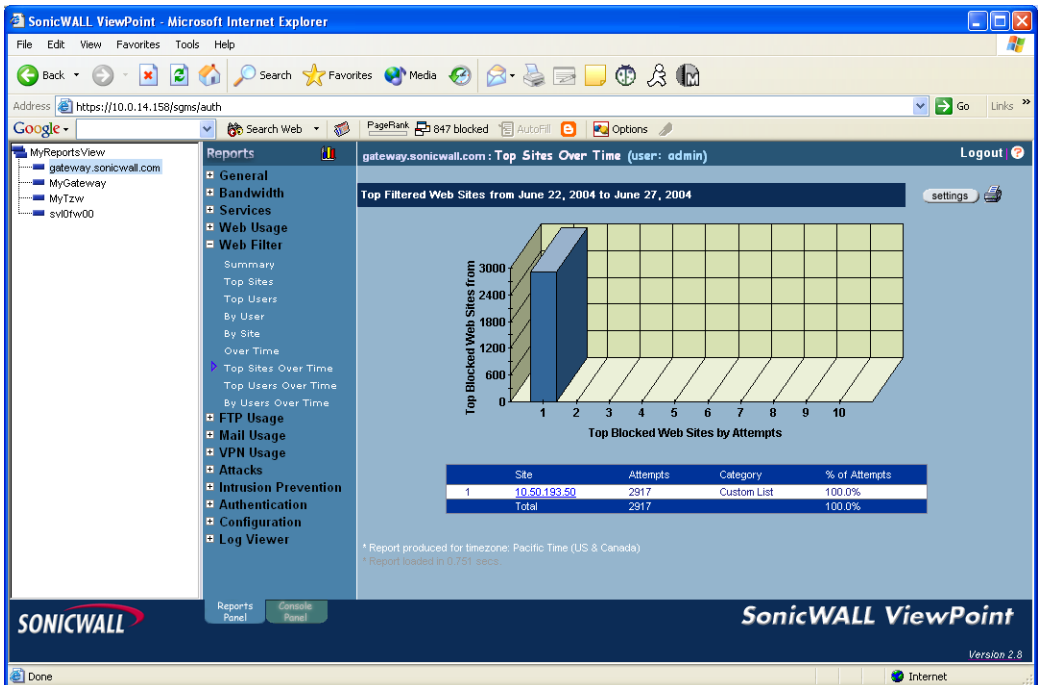
Viewing the Top Blocked Site Attempts Over Time

The Top Sites Over Time report displays the top blocked web sites for the specified time period.

To view the Web Filter Over Time report, follow these steps:

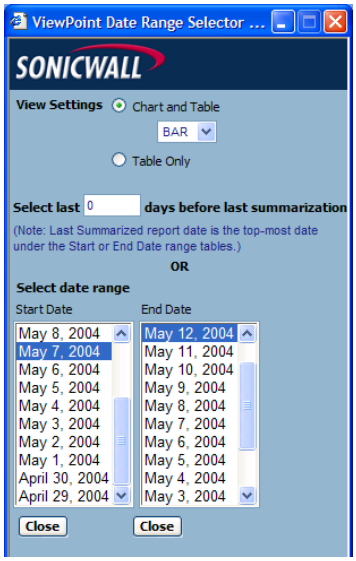
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Filter tree and click **Top Sites Over Time**. The Top Sites Over Time page appears (Figure 74).

Figure 74: Top Sites Over Time Page



5. The graph displays the number of access attempts for each of the top blocked web sites during the specified time period.
6. The table contains the following information:
   - **Site**—URL or IP address of the site.
   - **Attempts**—number of attempts.
   - **% of Attempts**—percentage of attempts to access the blocked site, compared to all other blocked site attempts. For example, if 500 attempts were made during the period and 100 of those attempts were for www.badsite.com, its **% of Attempts** field will display 20%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 75).

Figure 75: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.
9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

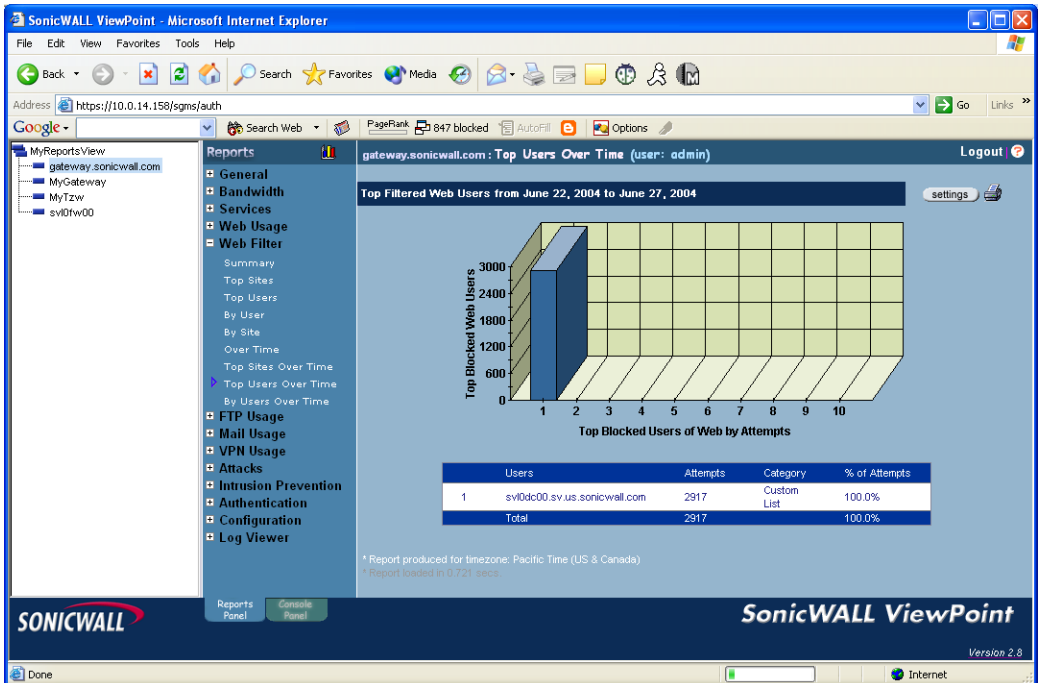
Viewing the Top Blocked Site Users Over Time

The Web Filter Top Users Over Time report displays the users who made the most attempts to access blocked sites during the specified time period.

To view the Top Users Over Time report, follow these steps:

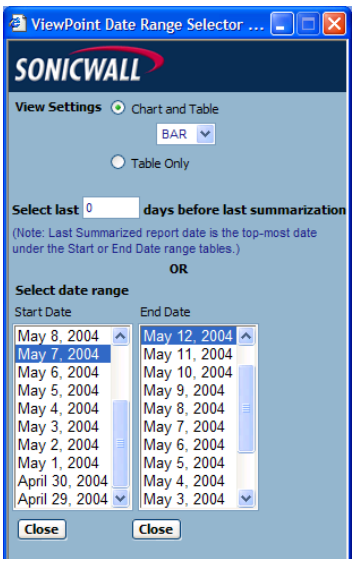
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Filter tree and click **Top Users Over Time**. The Top Users Over Time page appears (Figure 76).

Figure 76: Top Users Over Time Page



5. The pie chart displays the top users with the most blocked site attempts.
6. The table contains the following information:
   - **Users**—the IP address of the user.
   - **Attempts**—number of attempts.
   - **% of Attempts**—percentage of attempts to access the blocked site, compared to all other user attempts. For example, if 500 attempts were made during the period and 250 of those attempts were made by a single user, his **% of Attempts** field will display 50%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 77).

Figure 77: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.

9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

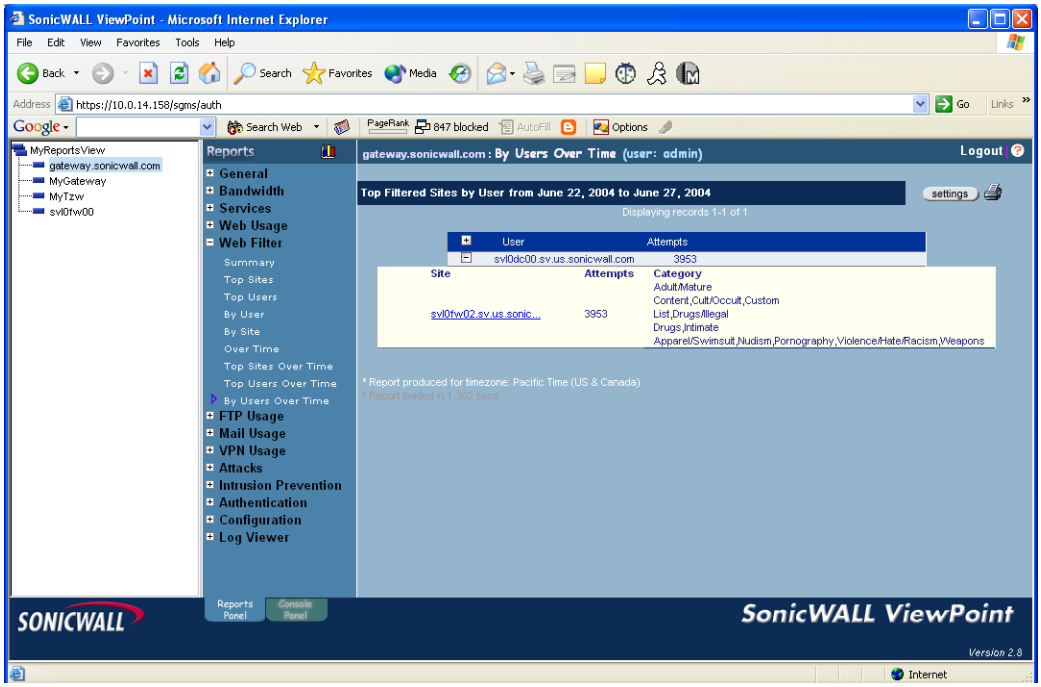
Viewing the Top Blocked Sites for Each User Over Time

The Web Filter By User report displays the top blocked web sites that each user attempted to access during the specified time period.

To view the By User Over Time report, follow these steps:

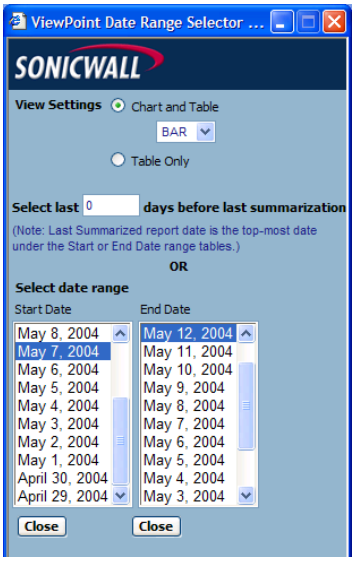
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Filter tree and click **By User Over Time**. The By User Over Time page appears (Figure 78).

Figure 78: By Users Over Time Page



5. The table contains the following information:
   - User—the IP address of the user.
   - Site—the top five sites visited by the user.
   - Attempts—number of attempts the user made to access each web site.
6. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 79).

Figure 79: Report Settings Dialog Box



7. Select whether to display a chart and table or a table only.
8. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
9. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

   Note: *These settings will stay in effect for all similar reports during your active login session.*

Viewing File Transfer Protocol Reports

FTP usage reports provide information on the amount of FTP usage that occurs through the selected SonicWALL appliance(s).

FTP usage reports can be used to view FTP bandwidth usage by the hour, day, or over a period of days. Additionally, you can view the top users of FTP bandwidth.

General bandwidth reports do not always provide a complete picture of network bandwidth usage. If a large amount of FTP traffic occurs during peak times, you might need more bandwidth, you might need to upgrade network equipment, or you might ask employees to use compression or transfer large files during non-peak times.

Note: *All reports appear in the Firewall's time zone.*

Select from the following:

- To view a summary of the daily FTP bandwidth usage, see "Viewing the FTP Summary Report" on page 82.
- To view the users who consume the most FTP bandwidth, see "Viewing the Top Users of FTP Bandwidth" on page 83.
- To view FTP bandwidth usage over a period of time, see "Viewing FTP Bandwidth Usage Over Time" on page 85.
- To view the users who consume the most FTP bandwidth over time, see "Viewing FTP Bandwidth Usage Over Time" on page 85.

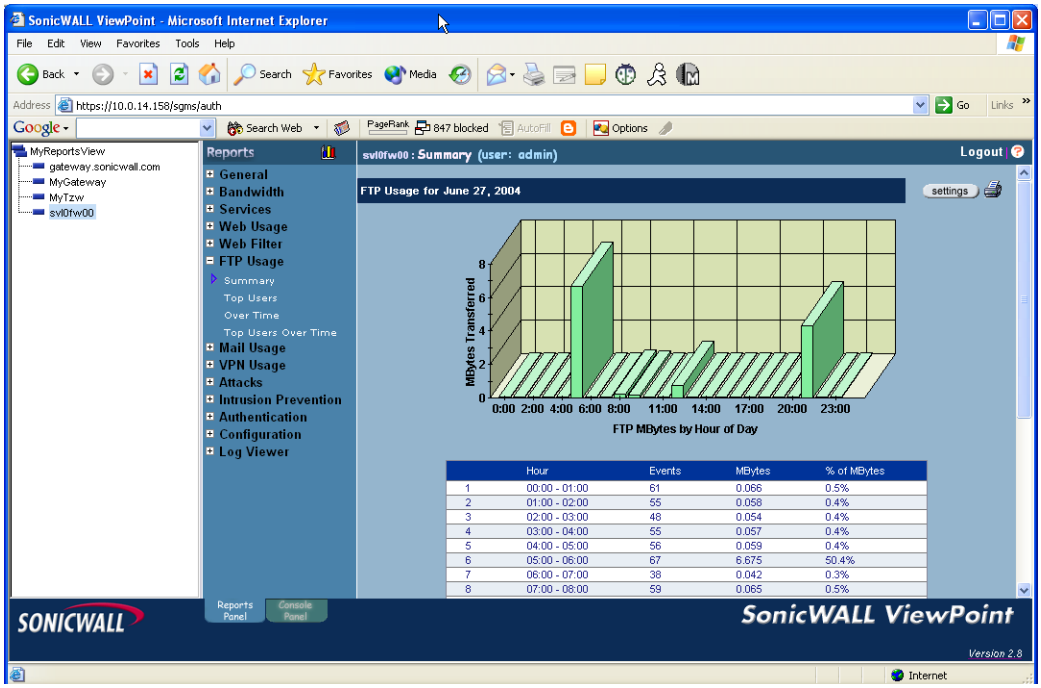
Viewing the FTP Summary Report

The FTP Summary report contains information on the amount of FTP bandwidth handled by a SonicWALL appliance or group of SonicWALL appliances during the specified day.

To view the FTP Summary report, follow these steps:

1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the FTP Usage tree and click **Summary**. The Summary page appears (Figure 80).

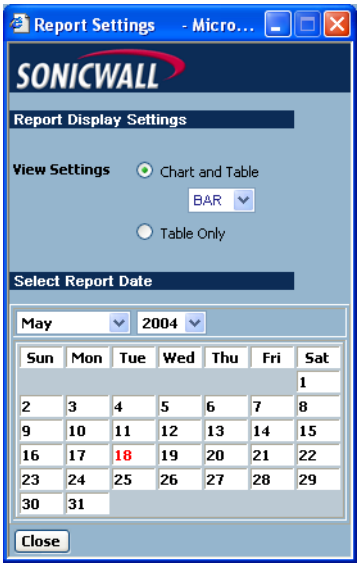
Figure 80: Summary Page



5. The bar graph displays the amount of FTP bandwidth transferred during each hour of the day.

6. The table contains the following information:
   - **Hour**—when the sample was taken.
   - **Events**—number of FTP events.
   - **MBytes**—number of megabytes transferred.
   - **% of MBytes**—percentage of megabytes transferred during this hour, compared to the day. For example, if 1000 megabytes of FTP data was transferred during the day and 100 megabytes was transferred at the 12:00 time period, the **% of MBytes** field will display 10%.
7. SonicWALL ViewPoint shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 81).

Figure 81: Report Settings Dialog Box



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

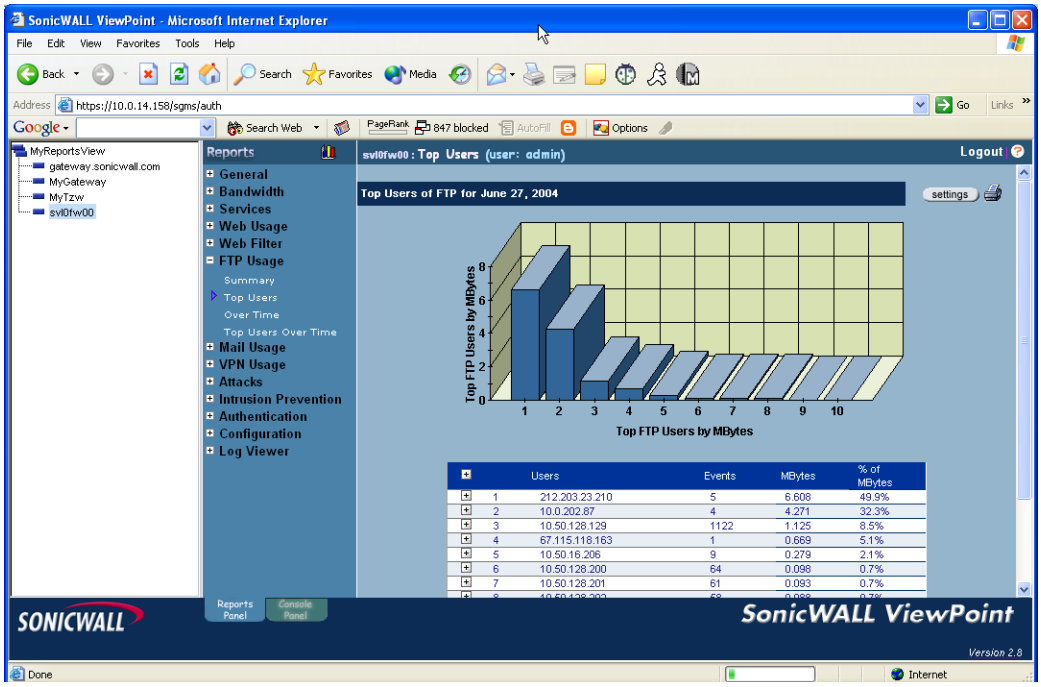
Viewing the Top Users of FTP Bandwidth

The Top Users report displays the users who used the most FTP bandwidth on the specified date.

To view the Top Users report, follow these steps:

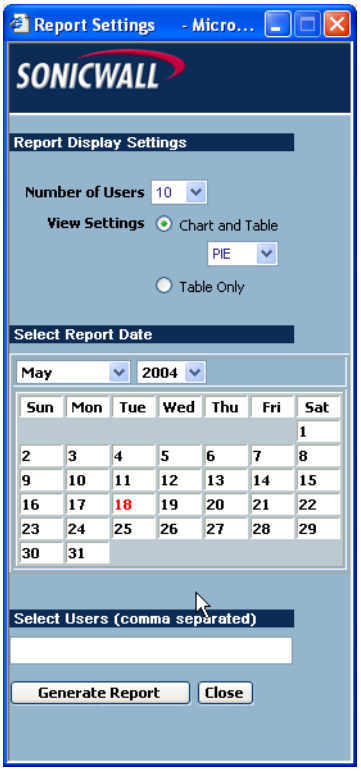
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the FTP Usage tree and click **Top Users**. The Top Users page appears (Figure 82).

Figure 82: Top Users Page



5. The pie chart displays the percentage of bandwidth used by each user. To view the sites visited by each user, expand the user's site tree (indicated by a '+' sign).
6. The table contains the following information:
   - **Users**—the IP address of the user.
   - **Events**—number of FTP Events.
   - **KBytes**—number of kilobytes transferred.
   - **% of KBytes**—percentage of kilobytes transferred by this user, compared to all users. For example, if 10000 kilobytes of data was transferred during the day and 2000 kilobytes was transferred by the top user, the **% of KBytes** field will display 20%.
7. By default, SonicWALL ViewPoint shows today's report, a pie chart, and the ten top users. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 83).

Figure 83: Report Settings Dialog Box



8. Select the number of users that will be displayed from the **Number of Users** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.
11. To display a limited group of users, enter the user IDs in the **Select Users** field and separate each entry with a comma.

    Note: *This field does not use pattern matching. For example, "john" will not match john_smith, john42, or big_john.*
12. When you are finished, click **Close.** SonicWALL ViewPoint refreshes the report based on the selected settings.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

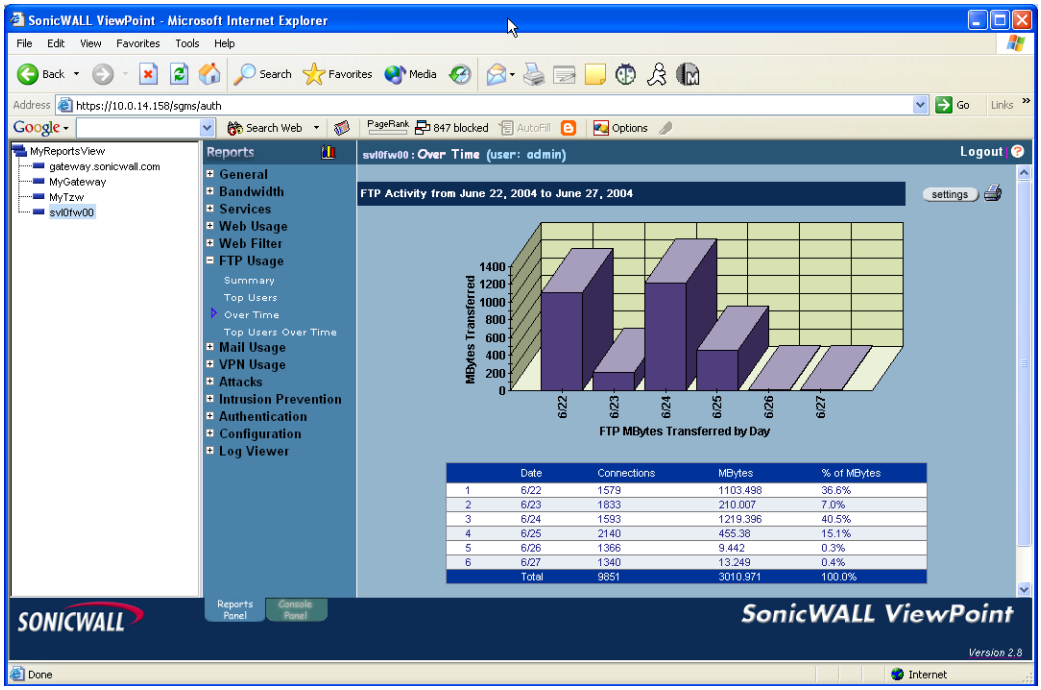
Viewing FTP Bandwidth Usage Over Time

The FTP Usage Over Time report displays the daily amount of FTP bandwidth handled by a SonicWALL appliance or group of SonicWALL appliances for the specified time period.

To view the FTP Usage Over Time report, follow these steps:

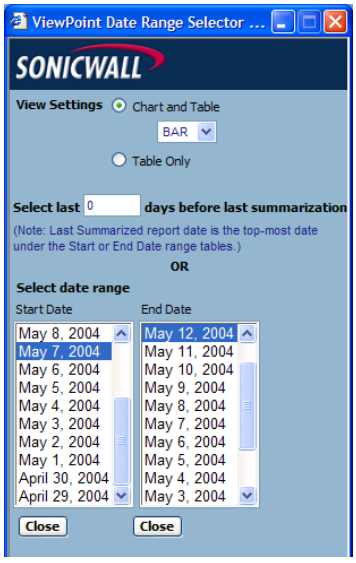
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the FTP Usage tree and click **Over Time**. The Over Time page appears (Figure 84).

Figure 84: Over Time Page



5. The bar graph displays the amount of FTP bandwidth transferred during each day of the specified time period.
6. The table contains the following information:
   - **Date**—when the sample was taken.
   - **Connections**—number of FTP connections.
   - **MBytes**—number of megabytes transferred.
   - **% of Usage**—percentage of megabytes transferred during this day, compared to the time period. For example, if 10,000 megabytes of FTP data was transferred during the time period and 2,500 megabytes of FTP data was transferred on one day, the **% of Usage** field will display 25%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 85).

Figure 85: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.

9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

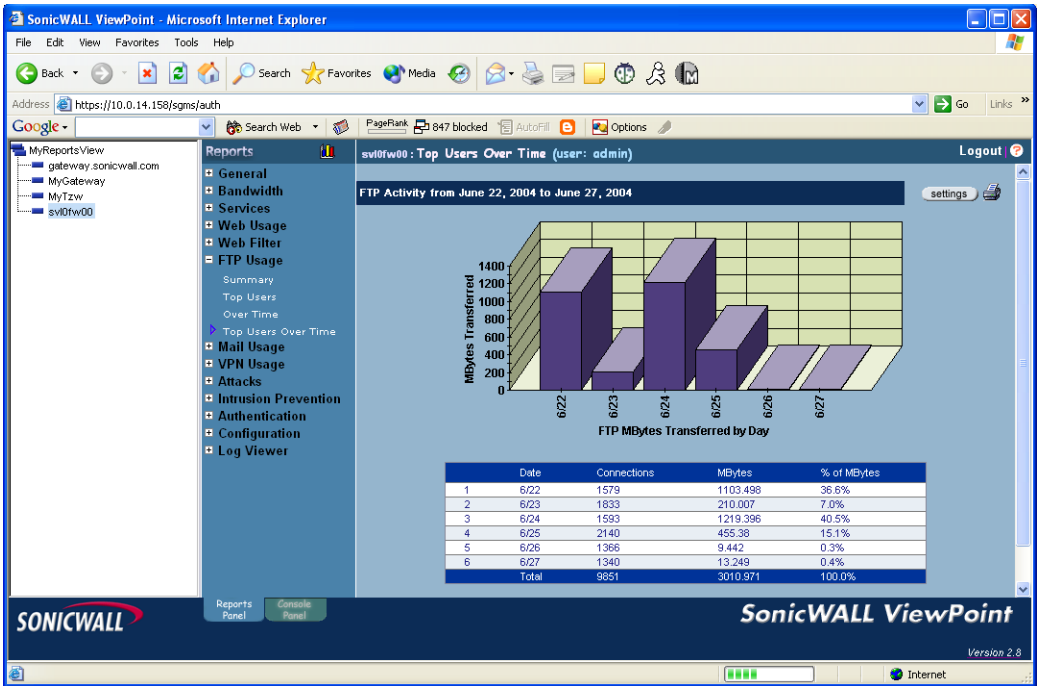
Viewing the Top Users of FTP Bandwidth Over Time

The Top Users Over Time report displays the users who used the most FTP bandwidth for the specified time period.

To view the Top Users Over Time report, follow these steps:

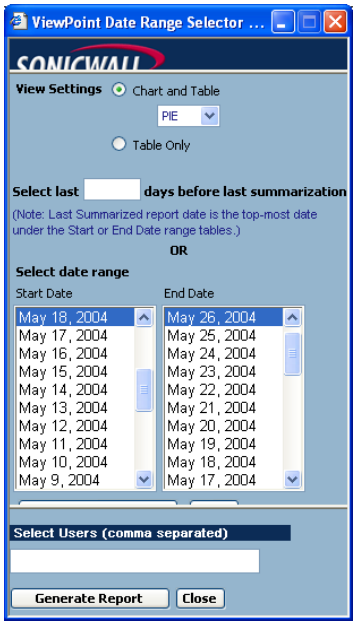
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the FTP Usage tree and click **Top Users Over Time**. The Top Users Over Time page appears (Figure 86).

Figure 86: Top Users Over Time Page



5. The pie chart displays the top users of FTP bandwidth. To view the FTP sites visited by each user, expand the user's site tree (indicated by a '+' sign).
6. The table contains the following information:
   - **Users**—the IP address of the user.
   - **Events**—number of FTP Events.
   - **MBytes**—number of megabytes transferred.
   - **% of MBytes**—percentage of megabytes transferred by this user, compared to all users. For example, if 10000 megabytes of data was transferred during the period and 2000 megabytes was transferred by the top user, the **% of MBytes** field will display 20%.
7. To change the report settings, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 87).

Figure 87: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.
9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. To display a limited group of users, enter the user IDs in the **Select Users** field and separate each entry with a comma.

    Note: *This field does not use pattern matching. For example, "john" will not match john_smith, john42, or big_john.*
11. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

Viewing Mail Usage Reports

Mail usage reports provide information on the amount of mail usage that occurs through the selected SonicWALL appliance(s).

Mail usage reports can be used to view mail bandwidth usage by the hour, day, or over a period of days. Additionally, you can view the top users of mail bandwidth.

Note: *Mail usage reports include SMTP, POP3, and IMAP traffic.*

General bandwidth reports do not always provide a complete picture of network bandwidth usage. If a large amount of mail traffic occurs during peak times, you might want to take some of the following actions:

- Add bandwidth
- Upgrade network equipment
- Ask employees to use compression or transfer large files during non-peak times
- Ask employees to place large files on an FTP site rather than sending them as mail attachments.

Note: *All reports appear in the Firewall's time zone.*

Select from the following:

- To view a summary of the daily mail usage, see "Viewing the Mail Usage Summary Report" on page 89.
- To view the users who consume the most mail bandwidth, see "Viewing the Top Users of Mail Bandwidth" on page 91.
- To view mail usage over a period of time, see "Viewing Mail Usage Over Time" on page 92.
- To view the users who consume the most mail bandwidth over time, see "Viewing the Top Users of Mail Bandwidth Over Time" on page 94.

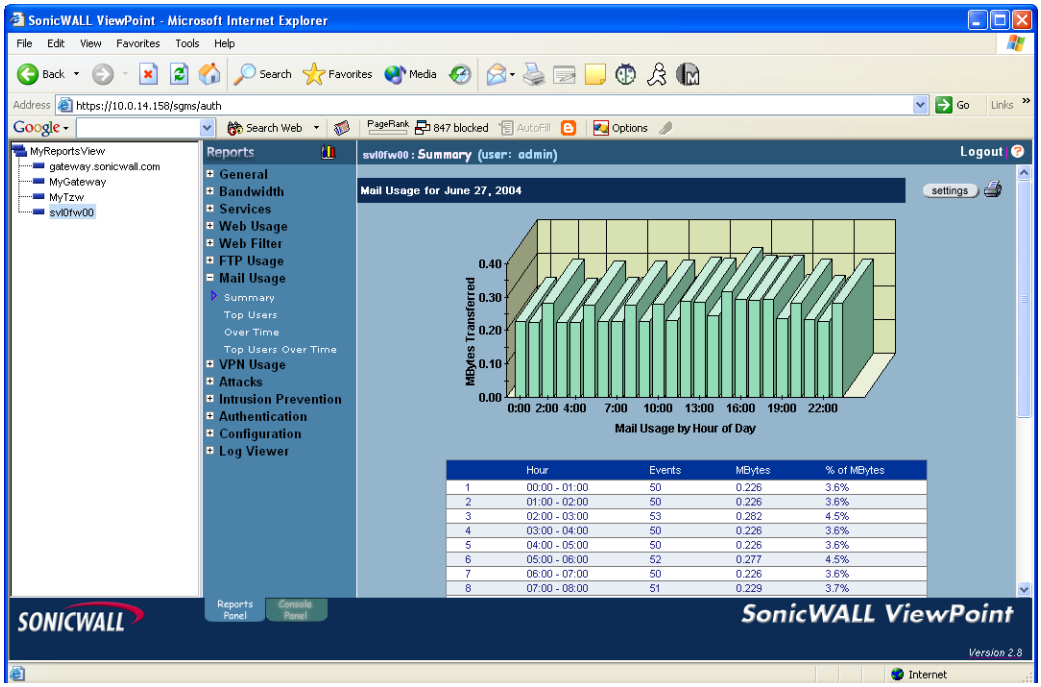
Viewing the Mail Usage Summary Report

The Mail Usage Summary report contains information on the amount of mail handled by a SonicWALL appliance or group of SonicWALL appliances during the specified day.

To view the Mail Usage Summary report, follow these steps:

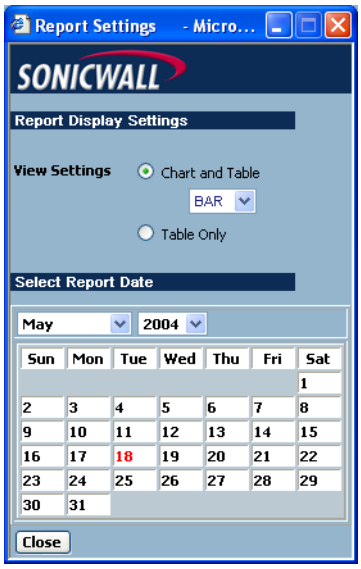
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Mail Usage tree and click **Summary**. The Summary page appears (Figure 88).

Figure 88: Summary Page



5. The bar graph displays the amount of mail sent and received during each hour of the day.
6. The table contains the following information:
   - **Hour**—when the sample was taken.
   - **Events**—number of mail events.
   - **KBytes**—number of kilobytes transferred.
   - **% of KBytes**—percentage of kilobytes transferred during this hour, compared to the day. For example, if 10,000 kilobytes of mail was transferred during the day and 1,000 kilobytes was transferred at the 12:00 time period, the **% of KBytes** field will display 10%.
7. SonicWALL ViewPoint shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 89).

Figure 89: Report Settings Dialog Box



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view.

10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

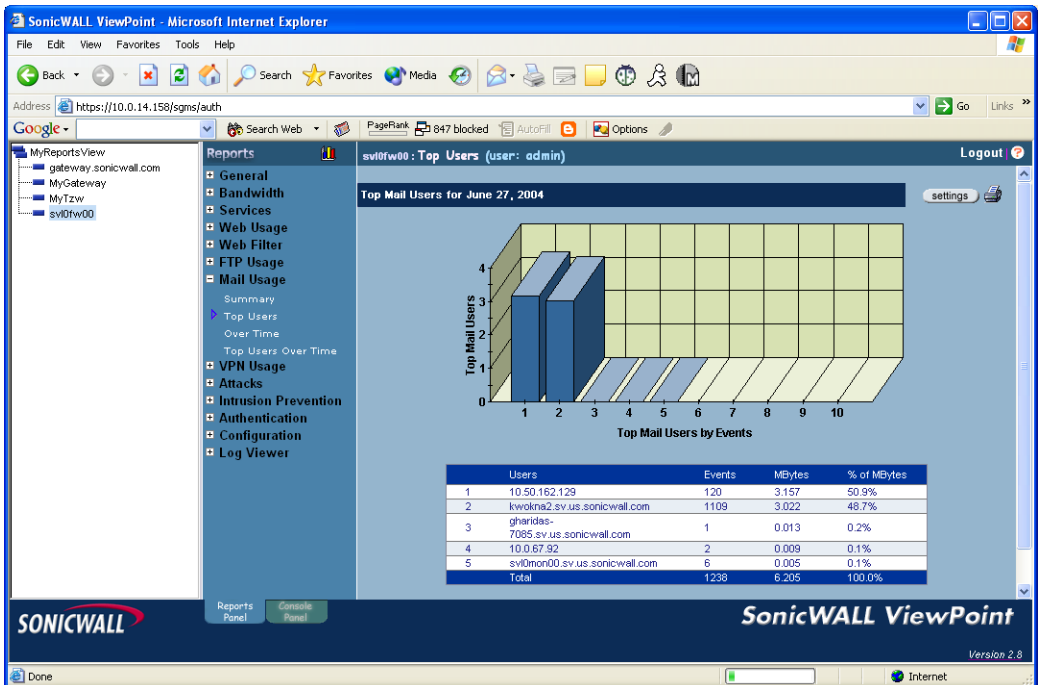
Viewing the Top Users of Mail Bandwidth

The Top Users report displays the users who sent and received the most mail on the specified date.

To view the Top Users report, follow these steps:

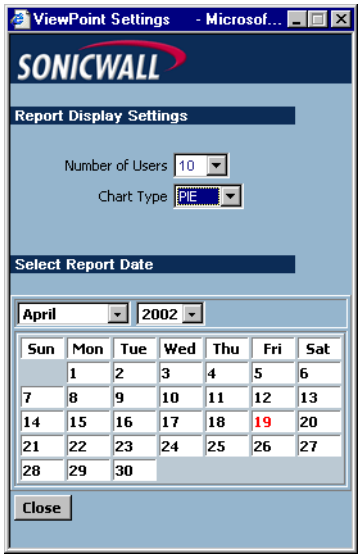
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Mail Usage tree and click **Top Users**. The Top Users page appears (Figure 90).

Figure 90: Top Users Page



5. The pie chart displays the percentage of mail sent and received by the top mail users.
6. The table contains the following information:
   - **Users**—the IP address of the user.
   - **Events**—number of mail messages sent and received.
   - **KBytes**—number of kilobytes transferred.
   - **% of KBytes**—percentage of kilobytes transferred by this user, compared to all users. For example, if 10000 kilobytes of data was transferred during the day and 2000 kilobytes was transferred by the top user, the **% of KBytes** field will display 20%.
7. By default, SonicWALL ViewPoint shows today's report, a pie chart, and the ten top users. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 91).

Figure 91: Report Settings Dialog Box


ViewPoint Settings - Microsof...
SONICWALL
Report Display Settings
Number of Users 10
Chart Type PIE
Select Report Date
April 2002
Sun Mon Tue Wed Thu Fri Sat
1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30
Close

8. Select the number of users that will be displayed from the **Number of Users** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.
11. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

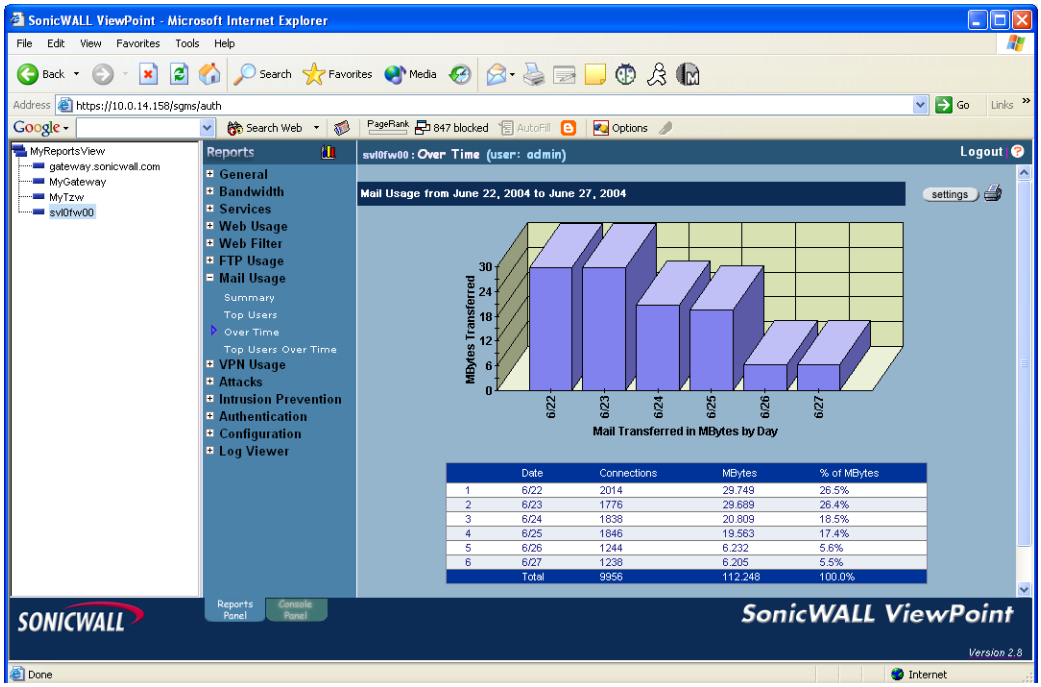
Viewing Mail Usage Over Time

The Mail Usage Over Time report displays the daily amount of mail handled by a SonicWALL appliance or group of SonicWALL appliances for the specified time period.

To view the Mail Usage Over Time report, follow these steps:

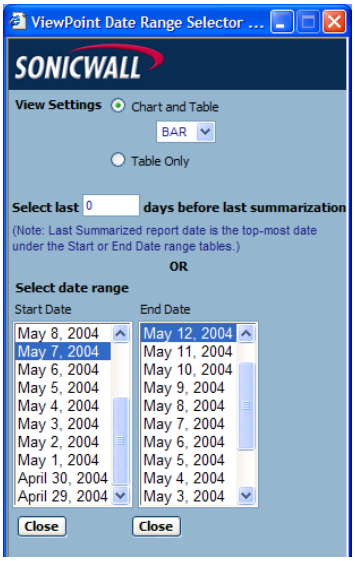
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Mail Usage tree and click **Over Time**. The Over Time page appears (Figure 92).

Figure 92: Over Time Page



5. The bar graph displays the amount of mail sent and received during each day of the specified time period.
6. The table contains the following information:
   - **Date**—when the sample was taken.
   - **Connections**—number of mail messages.
   - **KBytes**—number of kilobytes transferred.
   - **% of Usage**—percentage of kilobytes transferred during this day, compared to the time period. For example, if 10,000 kilobytes of mail was transferred during the time period and 2,500 kilobytes of mail was transferred on one day, the **% of Usage** field will display 25%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 93).

Figure 93: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.

9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

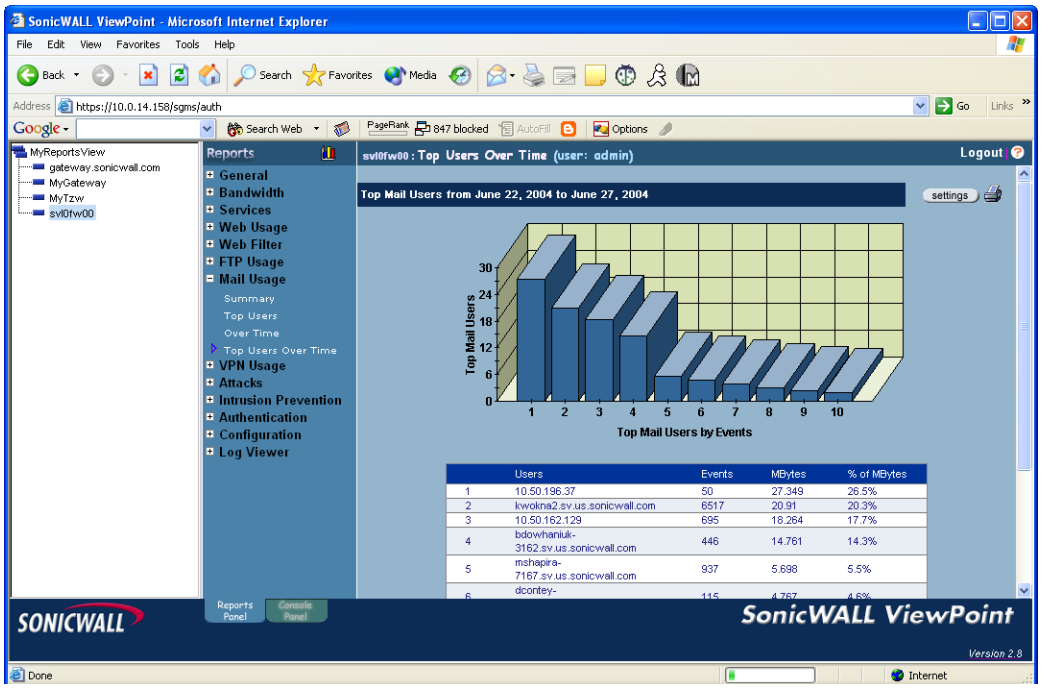
Viewing the Top Users of Mail Bandwidth Over Time

The Top Users Over Time report displays the users who sent and received the most mail during the specified time period.

To view the Top Users Over Time report, follow these steps:

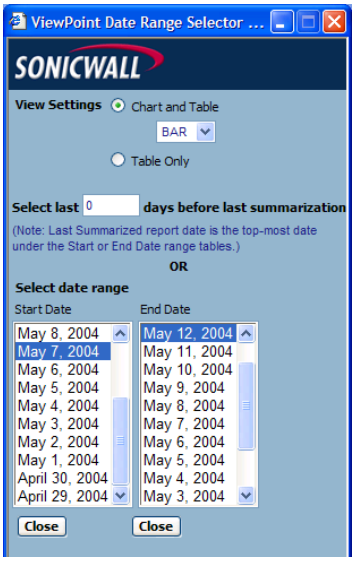
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Mail Usage tree and click **Top Users Over Time**. The Top Users Over Time page appears (Figure 94).

Figure 94: Top Users Over Time Page



5. The pie chart displays the percentage of mail sent and received by the top mail users.
6. The table contains the following information:
   - **Users**—the IP address of the user.
   - **Events**—number of mail messages sent and received.
   - **KBytes**—number of kilobytes transferred.
   - **% of KBytes**—percentage of kilobytes transferred by this user, compared to all users. For example, if 10000 kilobytes of data was transferred during the period and 2000 kilobytes was transferred by the top user, the **% of KBytes** field will display 20%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 95).

Figure 95: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.
9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close**.SonicWALL ViewPoint displays the report for the selected date range.

Note: *These settings will stay in effect for all similar reports during your active login session.*

Viewing VPN Usage Reports

VPN Usage reports provide information on the amount of VPN usage that occurs through the selected SonicWALL appliance(s).

VPN Usage reports can be used to view VPN usage by the hour, day, or over a period of days. Additionally, you can view the top users of VPN.

General bandwidth reports do not always provide a complete picture of network bandwidth usage. If a large amount of VPN traffic occurs, you might need to add bandwidth, upgrade network equipment, or reconfigure the VPN network.

Note: *All reports appear in the Firewall's time zone.*

Select from the following:

- To view a summary of the daily VPN bandwidth usage, see "Viewing the VPN Usage Summary Report" on page 96.
- To view the users who consume the most VPN bandwidth, see "Viewing the Top VPN Users" on page 98.
- To view VPN bandwidth usage over a period of time, see "Viewing VPN Usage Over Time" on page 99.
- To view the users who consume the most VPN bandwidth over time, see "Viewing VPN Usage Over Time" on page 99.
- To view the users who consume the most VPN bandwidth over time, see "Viewing the Top VPN Users Over Time" on page 101.
- To view VPN usage by policy, see "Viewing VPN Usage by Policy" on page 102.
- To view VPN usage by policy over time, see "Viewing the Top VPN Policies Over Time" on page 104.
- To view hourly VPN usage by policy, see "Viewing Hourly VPN Usage by Policy" on page 105.
- To view VPN services usage, see "Viewing the VPN Services Summary Report" on page 107.

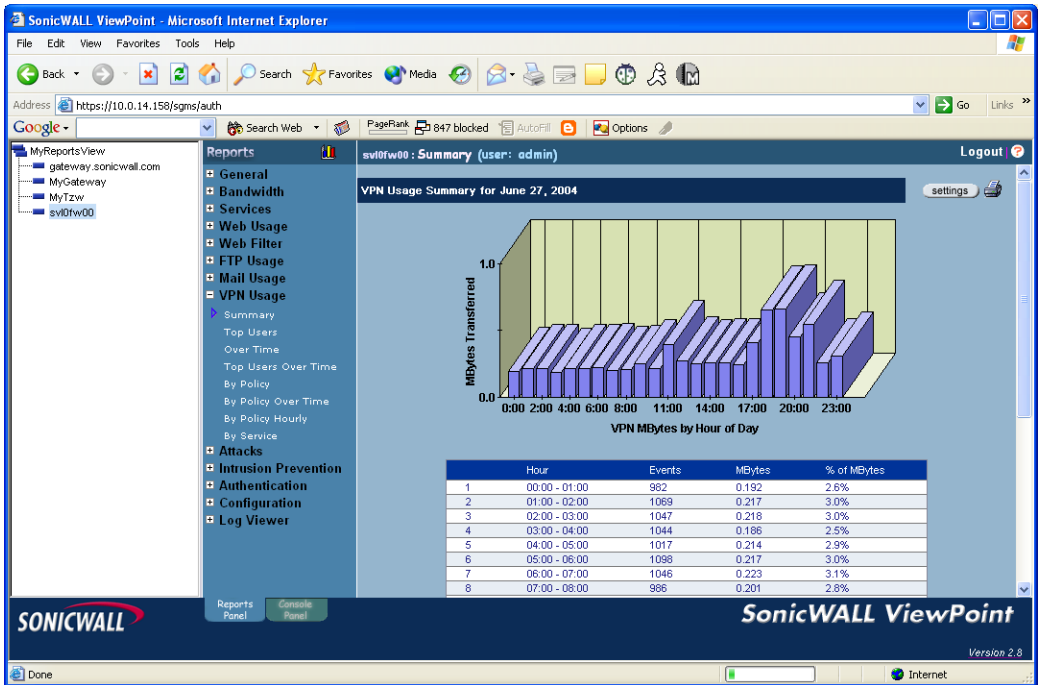
Viewing the VPN Usage Summary Report

The VPN Usage Summary report contains information on the number of VPN connections made through a SonicWALL appliance or group of SonicWALL appliances during the specified day.

To view the VPN Usage Summary report, follow these steps:

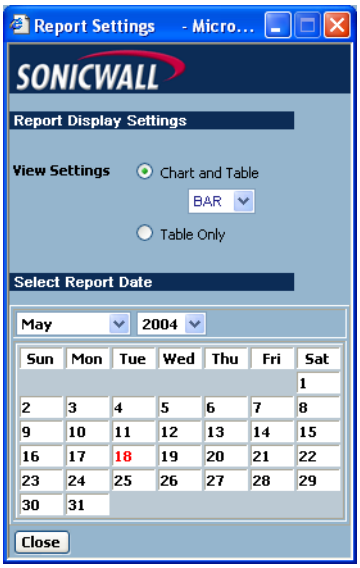
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the VPN Usage tree and click **Summary**. The Summary page appears (Figure 96).

Figure 96: Summary Page



5. The bar graph displays the number of VPN connections made during each hour of the day.
6. The table contains the following information:
   - **Hour**—when the sample was taken.
   - **Connections**—number of VPN connections.
   - **% of Connections**—percentage of VPN connections during this hour, compared to the day. For example, if 10,000 connections occurred during the day and 1,000 connections occurred during the 2:00 time period, the **% of Connections** field will display 10%.
7. SonicWALL ViewPoint shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 97).

Figure 97: Report Settings Dialog Box



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

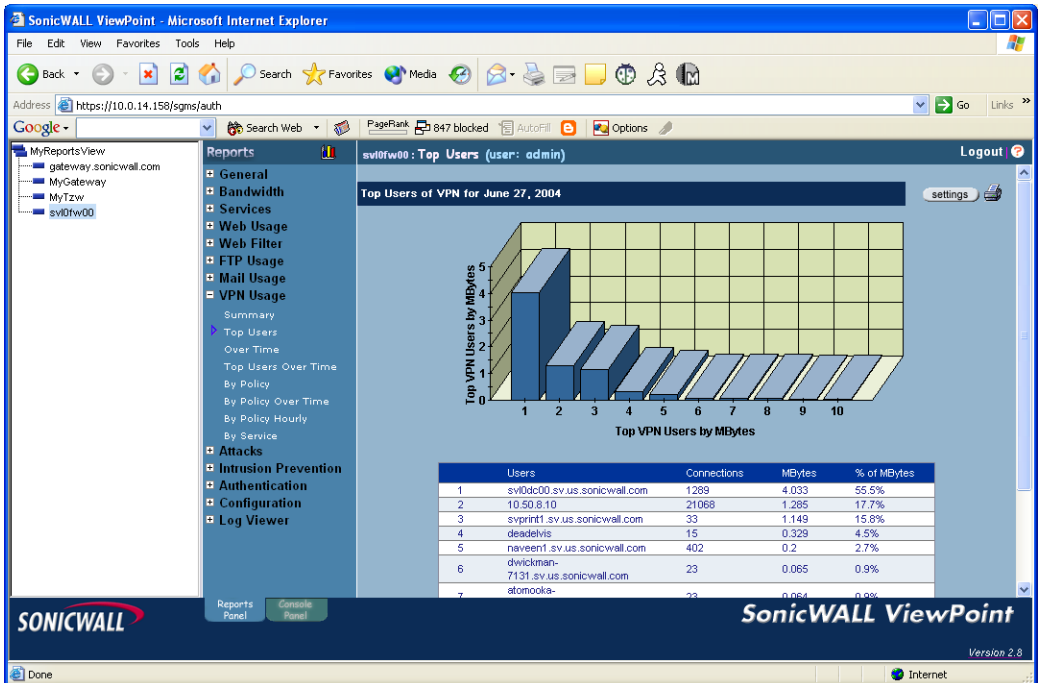
Viewing the Top VPN Users

The Top Users report displays the users who made the most VPN connections on the specified date.

To view the Top Users report, follow these steps:

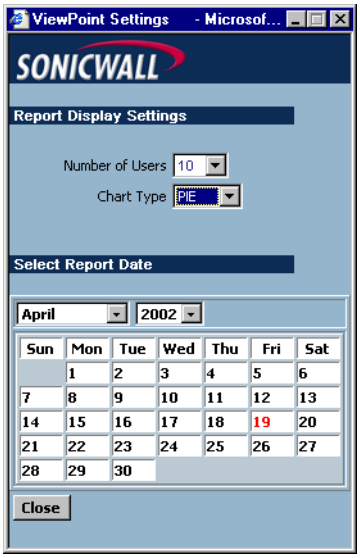
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the VPN Usage tree and click **Top Users**. The Top Users page appears (Figure 98).

Figure 98: Top Users Page



5. The pie chart displays the VPN connections for the top VPN users.
6. The table contains the following information:
   - **Users**—the IP address of the user.
   - **Connections**—number of VPN connections.
   - **% of Connections**—percentage of VPN connections made by this user, compared to all other users. For example, if 10,000 connections occurred during the day and 1,000 connections were made by one user, the **% of Connections** field will display 10%.
7. By default, SonicWALL ViewPoint shows today's report, a pie chart, and the ten top users. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 99).

Figure 99: Report Settings Dialog Box


ViewPoint Settings - Microsof...
SONICWALL
Report Display Settings
Number of Users 10
Chart Type PIE
Select Report Date
April 2002
Sun Mon Tue Wed Thu Fri Sat
1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30
Close

8. Select the number of users that will be displayed from the **Number of Users** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.
11. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

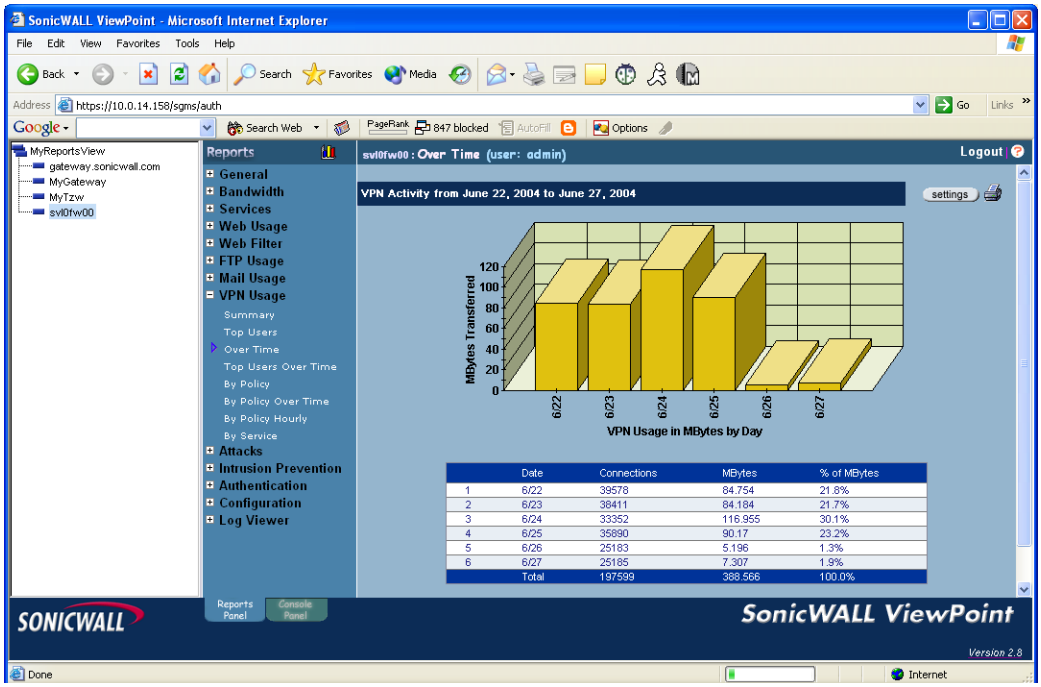
Viewing VPN Usage Over Time

The VPN Usage Over Time report displays the daily number of VPN connections made through a SonicWALL appliance or group of SonicWALL appliances during the specified time period.

To view the VPN Usage Over Time report, follow these steps:

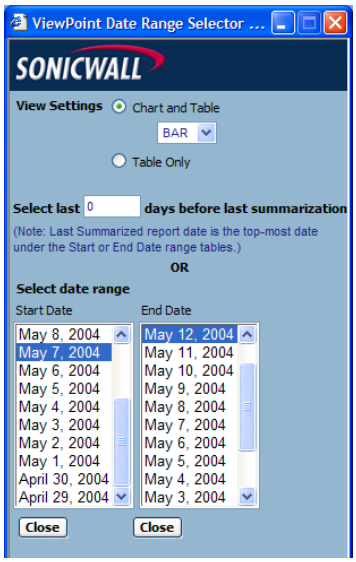
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the VPN Usage tree and click **Over Time**. The Over Time page appears (Figure 100).

Figure 100: Over Time Page



5. The bar graph displays the number of VPN connections made during each day of the specified time period.
6. The table contains the following information:
   - **Date**—when the sample was taken.
   - **Connections**—number of connections.
   - **KBytes**—number of kilobytes transferred.
   - **% of Usage**—percentage of kilobytes transferred during this day, compared to the time period. For example, if 10,000 kilobytes of mail was transferred during the time period and 2,500 kilobytes of mail was transferred on one day, the **% of Usage** field will display 25%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 101).

Figure 101: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.

9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

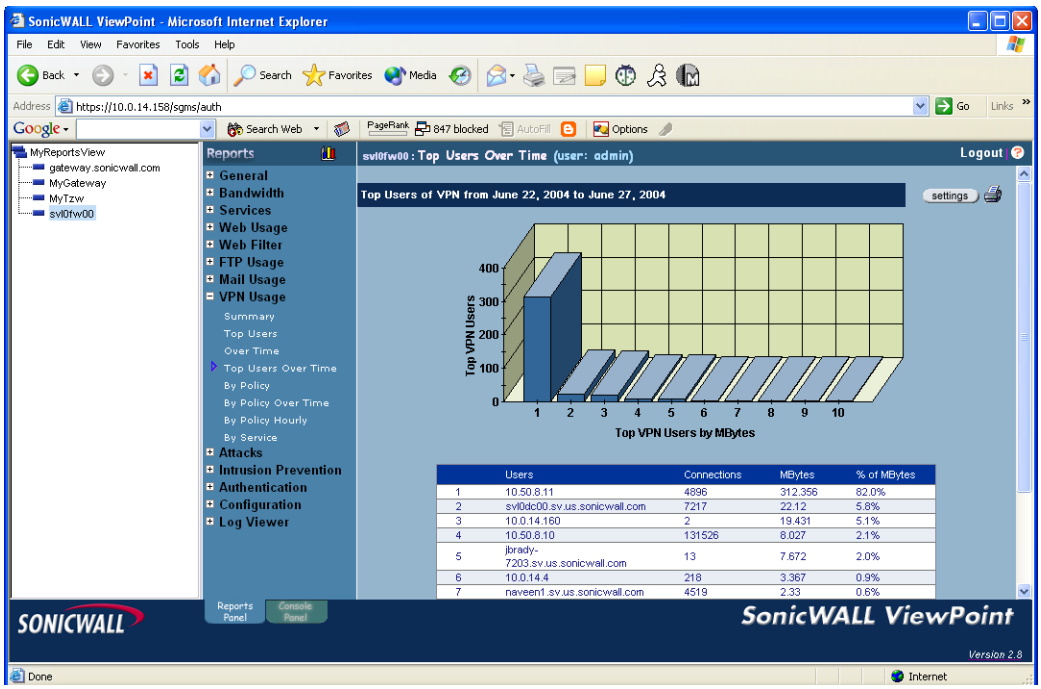
Viewing the Top VPN Users Over Time

The Top Users report displays the users who made the most VPN connections for the specified time period.

To view the Top Users report, follow these steps:

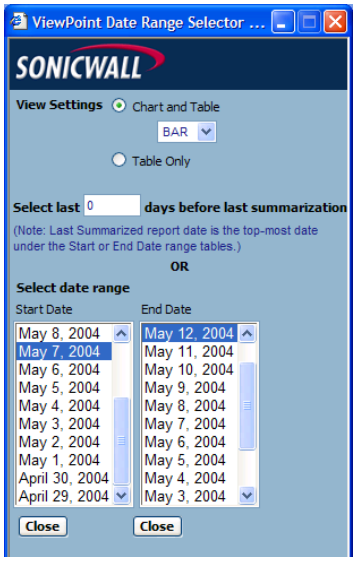
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the VPN Usage tree and click **Top Users Over Time**. The Top Users Over Time page appears (Figure 102).

   Figure 102: Top Users Over Time Page



5. The pie chart displays the VPN connections for the top VPN users.
6. The table contains the following information:
   - **Users**—the IP address of the user.
   - **Connections**—number of VPN connections.
   - **% of Connections**—percentage of VPN connections made by this user, compared to all other users. For example, if 10,000 connections occurred during the period and 1,000 connections were made by one user, the **% of Connections** field will display 10%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 103).

Figure 103: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.
9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

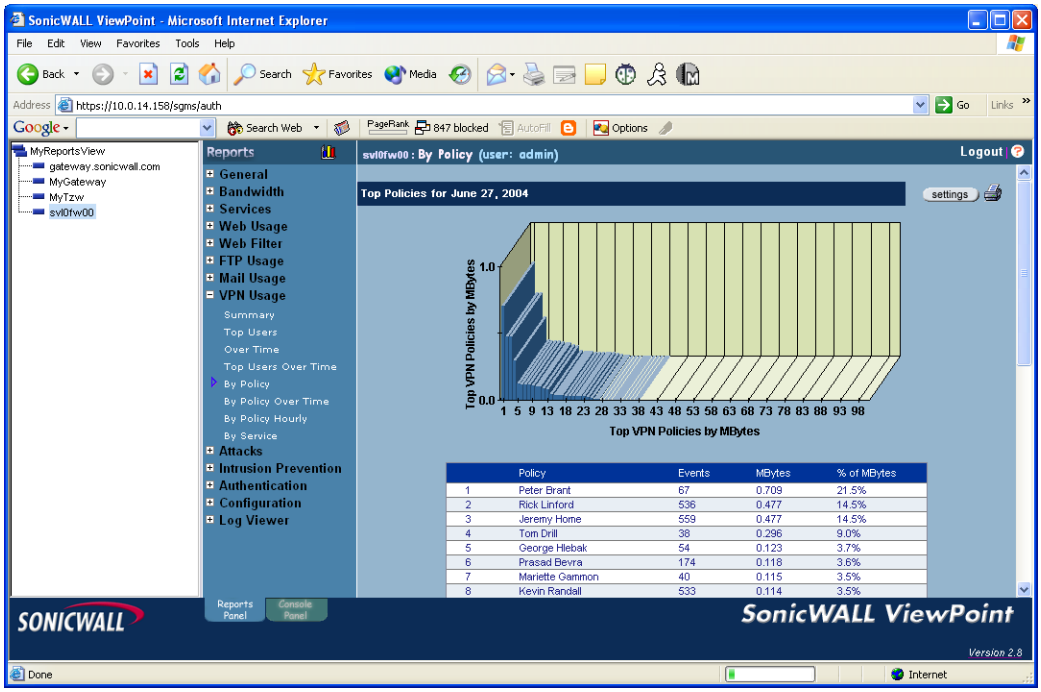
Viewing VPN Usage by Policy

The VPN Usage by Policy report contains information on VPN usage for a SonicWALL appliance, organized by policy.

To view the VPN Usage by Policy report, follow these steps:

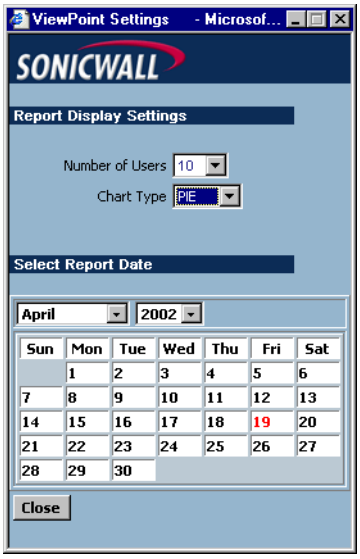
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the VPN Usage tree and click **By Policy**. The By Policy page appears (Figure 104).

Figure 104: By Policy Page



5. The pie chart displays the amount of data transferred for each policy.
6. The table contains the following information:
   - **Policy**—name of the policy.
   - **Events**—number of VPN events.
   - **MBytes**—number of megabytes transferred.
   - **% of MBytes**—percentage of megabytes transferred for this policy, compared to all other policies. For example, if a total of 10,000 megabytes was transferred and 2,500 megabytes was transferred for one policy, the **% of Usage** field will display 25%.
7. SonicWALL ViewPoint shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 97).

Figure 105: Report Settings Dialog Box



8. Select the number of users that will be displayed from the **Number of Users** list box.
9. Select the type of chart from the **Chart Type** list box.

10. Select the year, month, and day that you would like to view.
11. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

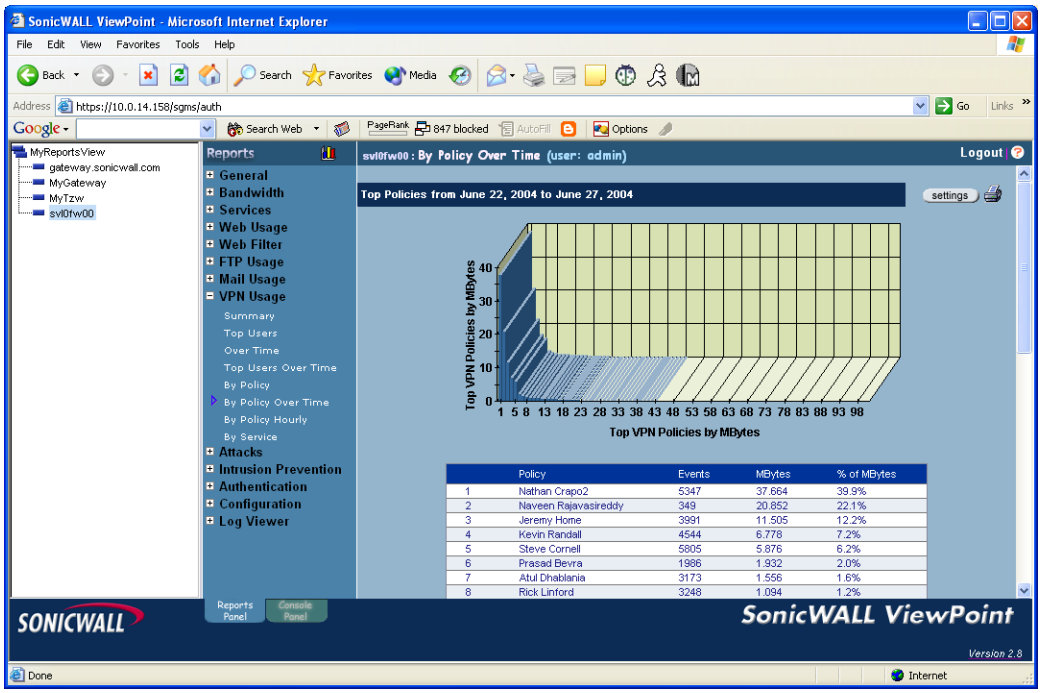
Viewing the Top VPN Policies Over Time

The By Policy Over Time report displays the top VPN Policies for the specified time period.

To view the By Policy Over Time report, follow these steps:

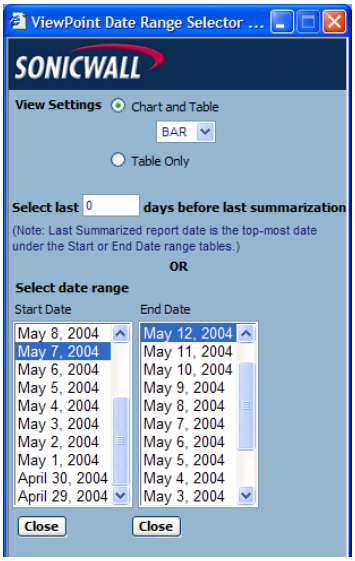
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the VPN Usage tree and click **By Policy Over Time**. The By Policy Over Time page appears (Figure 106).

   Figure 106: By Policy Over Time Page



5. The pie chart displays the VPN connections for the top policies.
6. The table contains the following information:
   - **Policy**—name of the policy.
   - **Events**—number of VPN events.
   - **MBytes**—number of megabytes transferred.
   - **% of MBytes**—percentage of megabytes transferred for this policy, compared to all other policies for the period. For example, if a total of 100,000 megabytes was transferred and 3,000 megabytes was transferred for one policy, the **% of Usage** field will display 3%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 107).

Figure 107: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.
9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

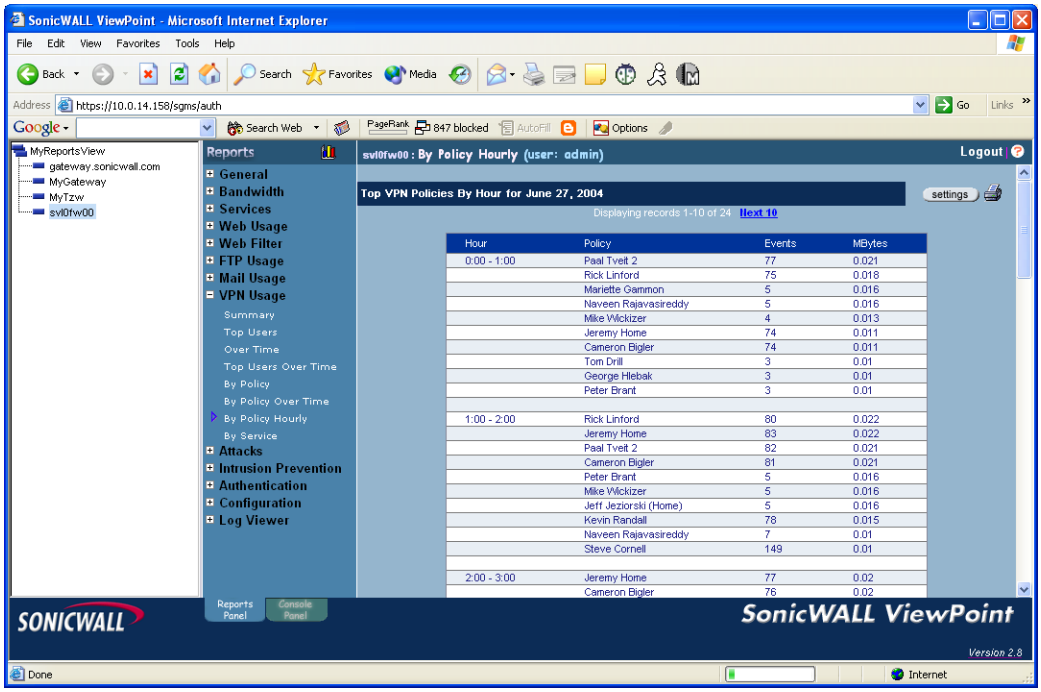
Viewing Hourly VPN Usage by Policy

The VPN Usage by Policy Hourly report contains information on hourly VPN usage for a SonicWALL appliance, organized by policy.

To view the VPN Usage by Policy Hourly report, follow these steps:

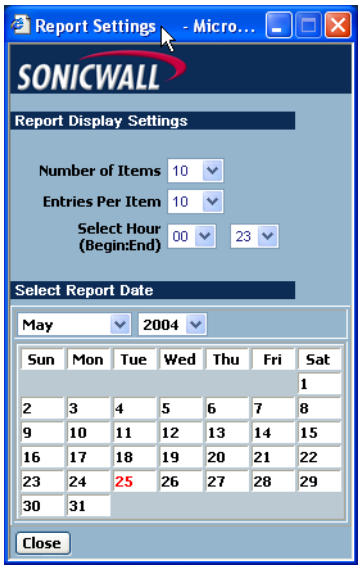
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the VPN Usage tree and click **By Policy Hourly**. The By Policy Hourly page appears (Figure 108).

Figure 108: By Policy Hourly Page


SonicWALL ViewPoint - Microsoft Internet Explorer
Reports
General
Bandwidth
Services
Web Usage
Web Filter
FTP Usage
Mail Usage
VPN Usage
Summary
Top Users
Over Time
Top Users Over Time
By Policy
By Policy Over Time
By Policy Hourly
By Service
Attacks
Intrusion Prevention
Authentication
Configuration
Log Viewer
svl0fw00 : By Policy Hourly (user: admin)
Logout
Top VPN Policies By Hour for June 27, 2004
settings
Displaying records 1-10 of 24 Next 10
Hour | Policy | Events | MBytes
0:00 - 1:00 | Paal Tveit 2 | 77 | 0.021
Rick Linford | 75 | 0.018
Mariette Gammon | 5 | 0.016
Naveen Rajavasireddy | 5 | 0.016
Mike Wickizer | 4 | 0.013
Jeremy Home | 74 | 0.011
Cameron Bigler | 74 | 0.011
Tom Drill | 3 | 0.01
George Hlebak | 3 | 0.01
Peter Brant | 3 | 0.01
1:00 - 2:00 | Rick Linford | 80 | 0.022
Jeremy Home | 83 | 0.022
Paal Tveit 2 | 82 | 0.021
Cameron Bigler | 81 | 0.021
Peter Brant | 5 | 0.016
Mike Wickizer | 5 | 0.016
Jeff Jeziorski (Home) | 5 | 0.016
Kevin Randall | 78 | 0.015
Naveen Rajavasireddy | 7 | 0.01
Steve Cornell | 149 | 0.01
2:00 - 3:00 | Jeremy Home | 77 | 0.02
Cameron Bigler | 76 | 0.02
SONICWALL
SonicWALL ViewPoint
Version 2.8

5. The table contains the following information:
   - **Hour**—period of time.
   - **Policy**—name of the policy.
   - **Events**—number of VPN events.
   - **MBytes**—number of megabytes transferred.
6. SonicWALL ViewPoint shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 109).

Figure 109: Report Settings Dialog Box


Report Settings - Micro...
SONICWALL
Report Display Settings
Number of Items 10
Entries Per Item 10
Select Hour (Begin:End) 00 23
Select Report Date
May 2004
Sun Mon Tue Wed Thu Fri Sat
1
2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 29
30 31
Close

7. Select the number of items that will be displayed from the **Number of Items** list box.
8. Select the number of entries per item from the **Entries per Item** list box.
9. Select the beginning and ending hour that will be displayed in the report.
10. Select the year, month, and day that you would like to view.

11. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

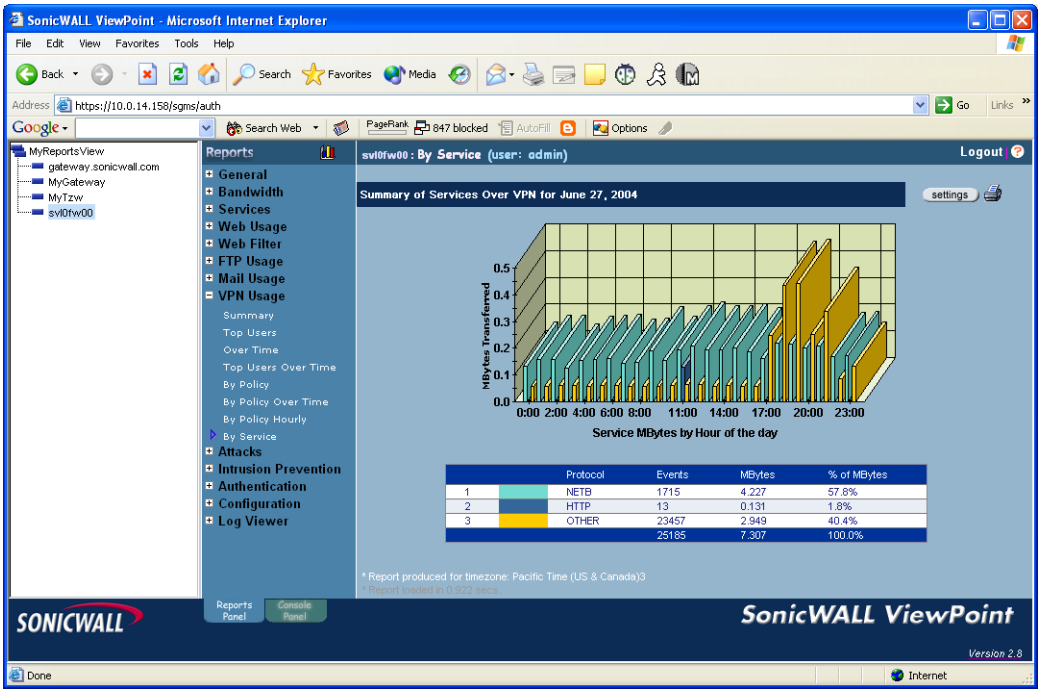
Viewing the VPN Services Summary Report

The Services Summary report displays the amount of traffic handled by each service during each hour of the specified day.

To view the Services Summary report, follow these steps:

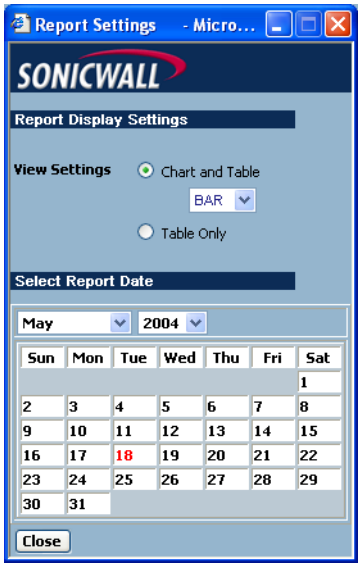
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the VPN Usage tree and click **By Service**. The By Service page appears (Figure 110).

Figure 110: By Service Page



5. The bar graph displays the amount of bandwidth used by each service during each hour of the day.
6. The table contains the following information:
   - **Protocol**—the service.
   - **Events**—number of events or "hits."
   - **MBytes**—number of megabytes.
   - **% of MBytes**—percentage of megabytes transferred by this service on the selected day, compared to all other services. For example, if 1,000 megabytes were transferred and 900 megabytes were handled by the HTTP service, the **% of Mbytes** field will display 90%.
7. SonicWALL ViewPoint shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 111).

Figure 111: Report Settings Dialog Box



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

Viewing Attack Reports

Attack reports show the number of attacks that were directed at or through the selected SonicWALL appliance(s). These include denial of service attacks, intrusions, probes, and all other malicious activity directed at the SonicWALL appliance or computers on the LAN or DMZ.

Note: *All reports appear in the Firewall's time zone.*

Select from the following:

- To view a summary of the attacks, see "Viewing the Attack Summary Report" on page 109.
- To view the attacks by attack category, see "Viewing the Attacks by Category" on page 110.
- To view the attacks by source IP address, see "Viewing the Attacks by Source" on page 112.
- To view a summary of the errors and exceptions, see "Viewing the Errors and Exceptions Report" on page 113.
- To view attacks over a period of time, see "Viewing Attack Reports Over Time" on page 115.
- To view errors and exceptions over a period of time, see "Viewing Errors Over Time" on page 119.

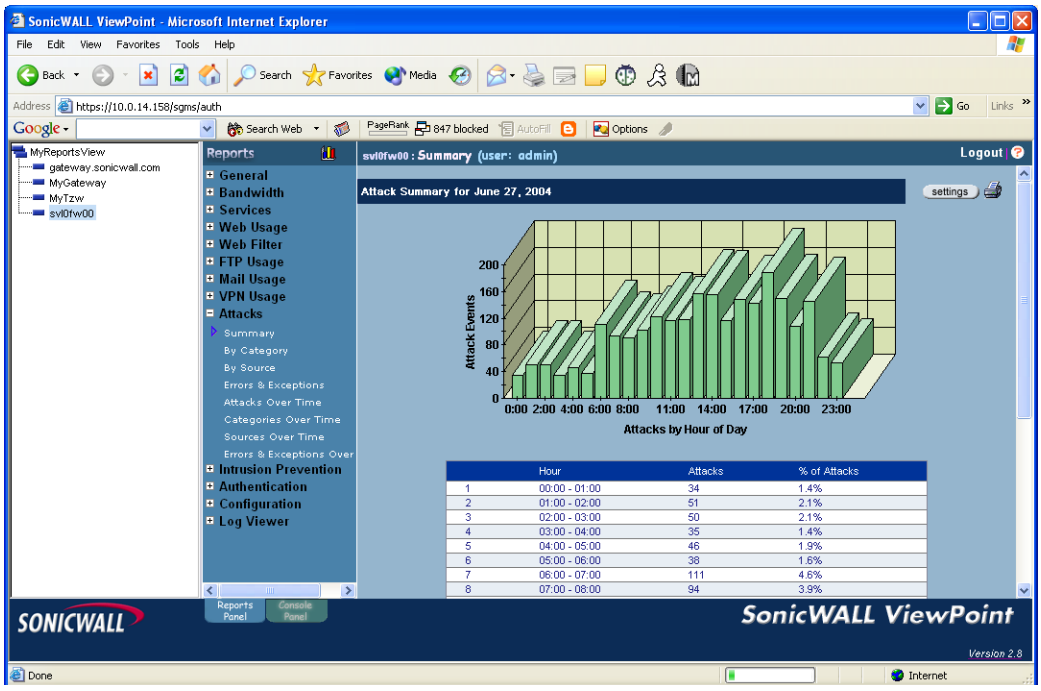
Viewing the Attack Summary Report

The Attack Summary report contains information on the number of attacks attempted on a SonicWALL appliance or group of SonicWALL appliances during the specified day.

To view the Attack Summary report, follow these steps:

1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Attacks tree and click **Summary**. The Summary page appears (Figure 112).

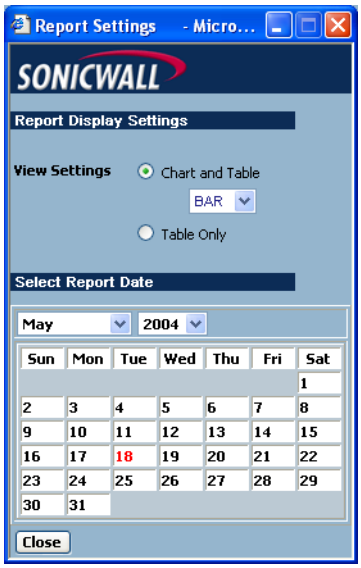
Figure 112: Summary Page



5. The bar graph displays the number of attacks attempted during each hour of the day. The table contains the following information:
   - **Hour**—when the sample was taken.
   - **Attacks**—number of attack attempts.
   - **% of Attacks**—percentage of attacks during this hour, compared to the day. For example, if 1,000 attacks occurred during the day and 100 attacks occurred during the 2:00 time period, the **% of Attacks** field will display 10%.

6. SonicWALL ViewPoint shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 113).

Figure 113: Report Settings Dialog Box



7. Select the type of chart to display from the **View Settings** area.
8. Select the year, month, and day that you would like to view.
9. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

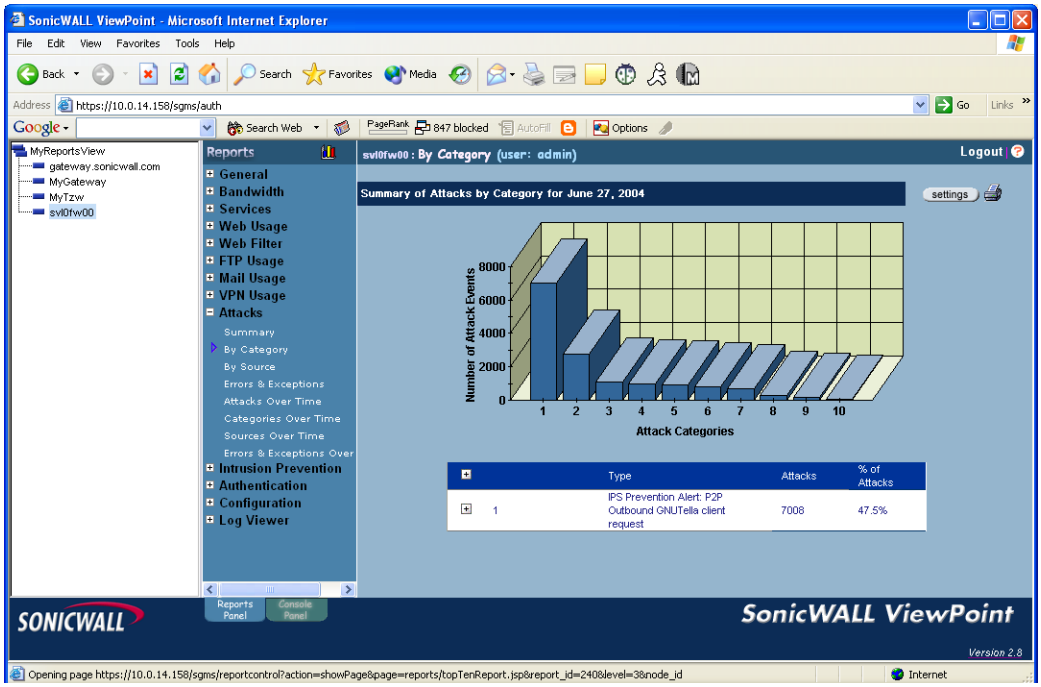
Viewing the Attacks by Category

The Attacks by Category report displays the attacks that occurred on the specified date, sorted by category.

To view the Attacks by Category report, follow these steps:

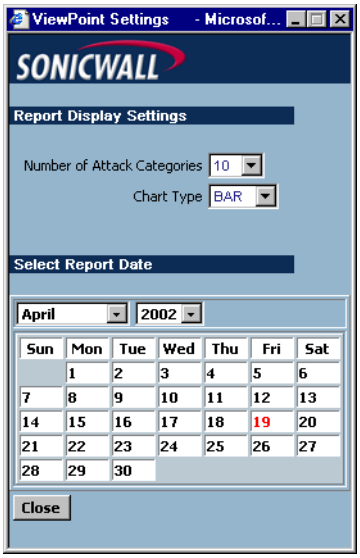
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Attacks tree and click **By Category**. The By Category page appears (Figure 114).

Figure 114: By Category Page



5. The pie chart displays the percentage of each type of attack. To view source and destination information on the individual attacks, expand the category tree (indicated by a '+' sign).
6. The table contains the following information:
   - **Type**—the type of attack.
   - **Attacks**—number of attacks.
   - **% of Attacks**—percentage of this type of attack, compared to all other attack types. For example, if 5,000 attacks occurred during the day and the IP Spoof makes up 500 of the attacks, its **% of Attacks** field will display 10%.
7. By default, SonicWALL ViewPoint shows today's report, a pie chart, and the ten top categories. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 115).

Figure 115: Report Settings Dialog Box



8. Select the number of categories that will be displayed from the **Number of Categories** list box.
9. Select the type of chart from the **Chart Type** list box.

10. Select the year, month, and day that you would like to view.
11. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

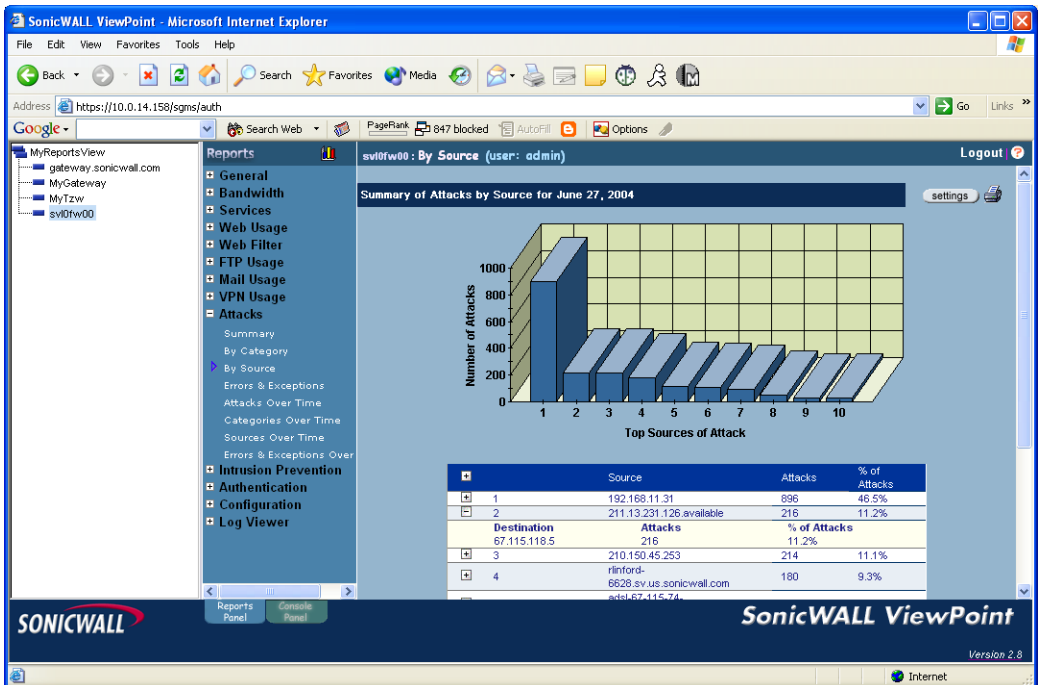
Viewing the Attacks by Source

The Attacks by Source report displays the top sources of attacks.

To view the Attacks by Source report, follow these steps:

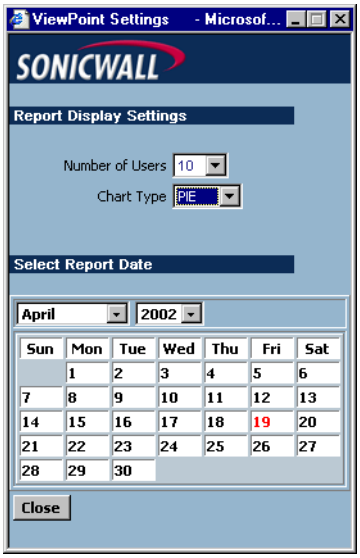
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Attacks tree and click **By Source**. The By Source page appears (Figure 116).

Figure 116: By Source Page



5. The pie chart displays the percentage of each source of attack. To view source and destination information on the individual attacks, expand the source tree (indicated by a '+' sign).
6. The table contains the following information:
   - **Source**—the source of the attack.
   - **Attacks**—number of attacks.
   - **% of Attacks**—percentage of attacks from this source, compared to all other sources. For example, if 1,000 attacks occurred during the day and 500 attacks came from one source, its **% of Attacks** field will display 50%.
7. By default, SonicWALL ViewPoint shows today's report, a pie chart, and the ten top sources. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 117).

Figure 117: Report Settings Dialog Box


ViewPoint Settings - Microsof...
SONICWALL
Report Display Settings
Number of Users 10
Chart Type PIE
Select Report Date
April 2002
Sun Mon Tue Wed Thu Fri Sat
1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30
Close

8. Select the number of sources that will be displayed from the **Number of Sources** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.
11. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

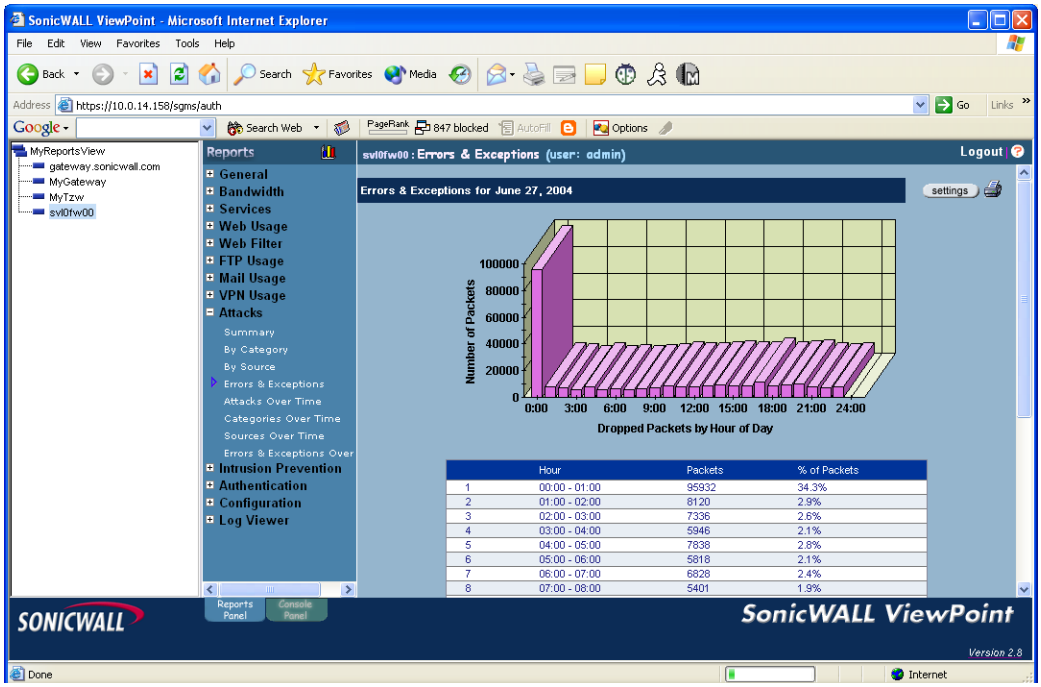
Viewing the Errors and Exceptions Report

The Errors and Exceptions Summary report contains information on the number of dropped packets on a SonicWALL appliance or group of SonicWALL appliances during the specified day.

To view the Errors and Exceptions report, follow these steps:

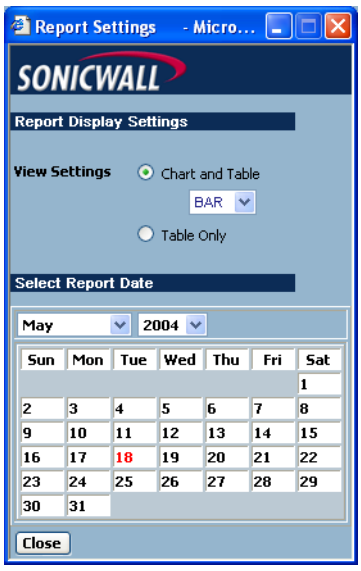
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Attacks tree and click **Errors & Exceptions**. The Errors & Exceptions page appears (Figure 118).

Figure 118: Errors & Exceptions Page



5. The bar graph displays the packets that were dropped during each hour of the day.
6. The table contains the following information:
   - **Hour**—when the sample was taken.
   - **Packets**—number of dropped packets.
   - **% of Packets**—percentage of packets dropped during this hour, compared to the day. For example, if 1,000 packets were dropped during the day and 100 packets were dropped during the 1:00 time period, the **% of Packets** field will display 10%.
7. SonicWALL ViewPoint shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 119).

Figure 119: Report Settings Dialog Box



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

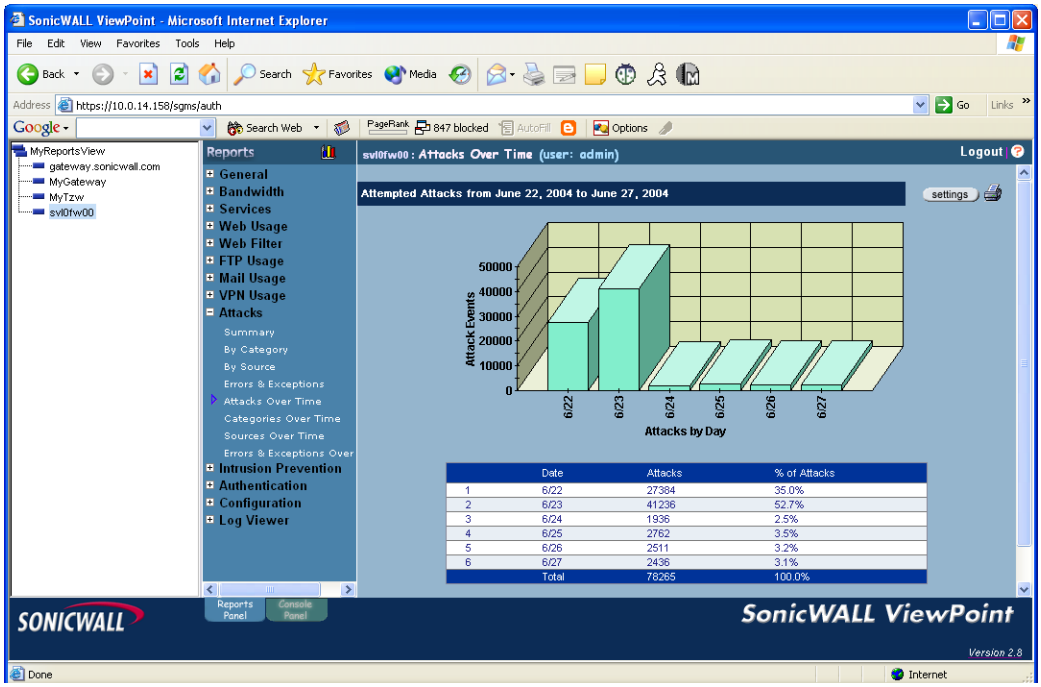
Viewing Attack Reports Over Time

The Attacks Over Time report displays the daily number of attempted attacks during the specified time period.

To view the Attacks Over Time report, follow these steps:

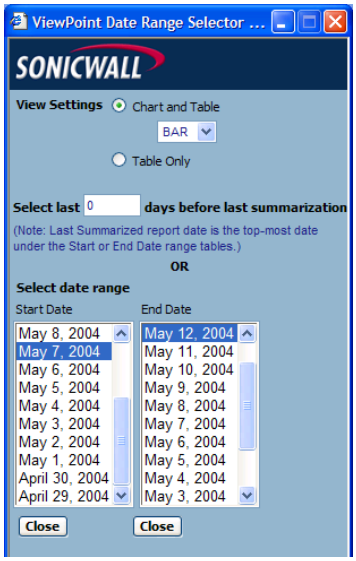
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Attacks tree and click **Attacks Over Time**. The Attacks Over Time page appears (Figure 120).

Figure 120: Attacks Over Time Page



5. The bar graph displays the number of attacks attempted each day of the specified time period.
6. The table contains the following information:
   - **Date**—when the sample was taken.
   - **Attacks**—number of attacks.
   - **% of Attacks**—percentage of attacks on this day, compared to the time period. For example, if 10,000 attacks occurred during the time period and 1,000 attacks occurred on Thursday, its **% of Attacks** field will display 10%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 121).

Figure 121: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.
9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

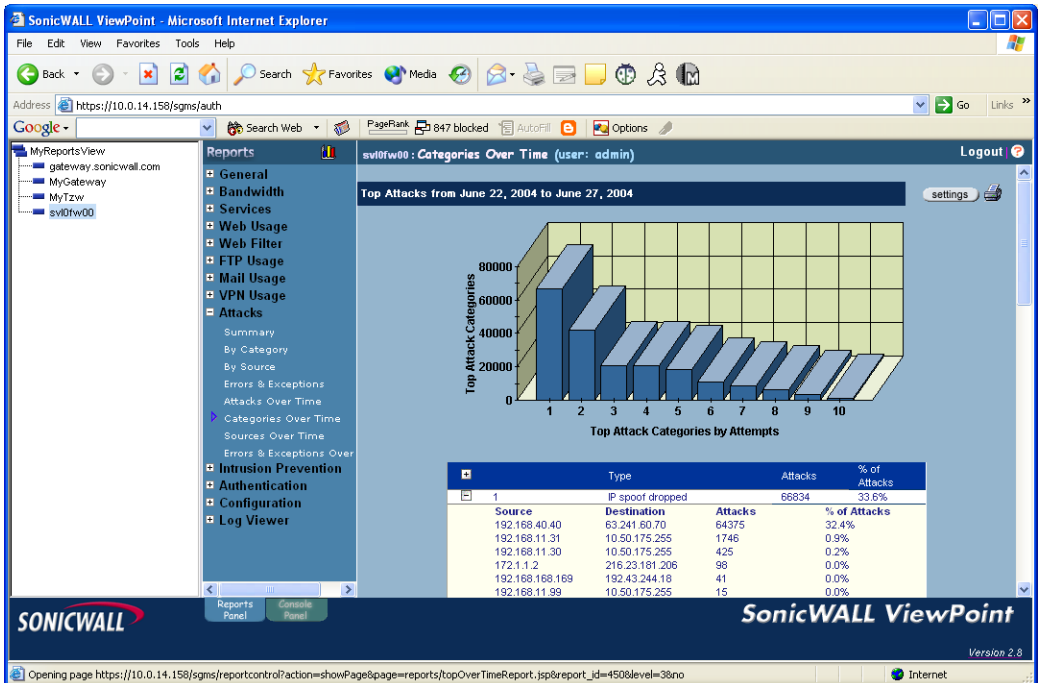
Viewing the Attacks by Category Over Time

The Categories Over Time report displays the number of attacks in each attack category during the specified time period.

To view the Categories Over Time report, follow these steps:

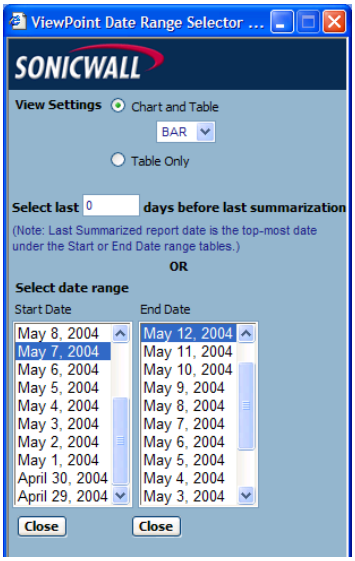
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Attacks tree and click **Categories Over Time**. The Categories Over Time page appears (Figure 122).

Figure 122: Categories Over Time Page



5. The bar graph displays the number of attacks attempted each day of the specified time period. To view source and destination information on the individual attacks, expand the category tree (indicated by a '+' sign).
6. The table contains the following information:
   - **Category**—category of the attack.
   - **Attacks**—number of attacks.
   - **% of Attacks**—percentage of attacks for this category, compared to other categories. For example, if 5,000 attacks occurred during the time period and 1,000 attacks occurred for a category, its **% of Attacks** field will display 20%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 123).

Figure 123: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.

9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

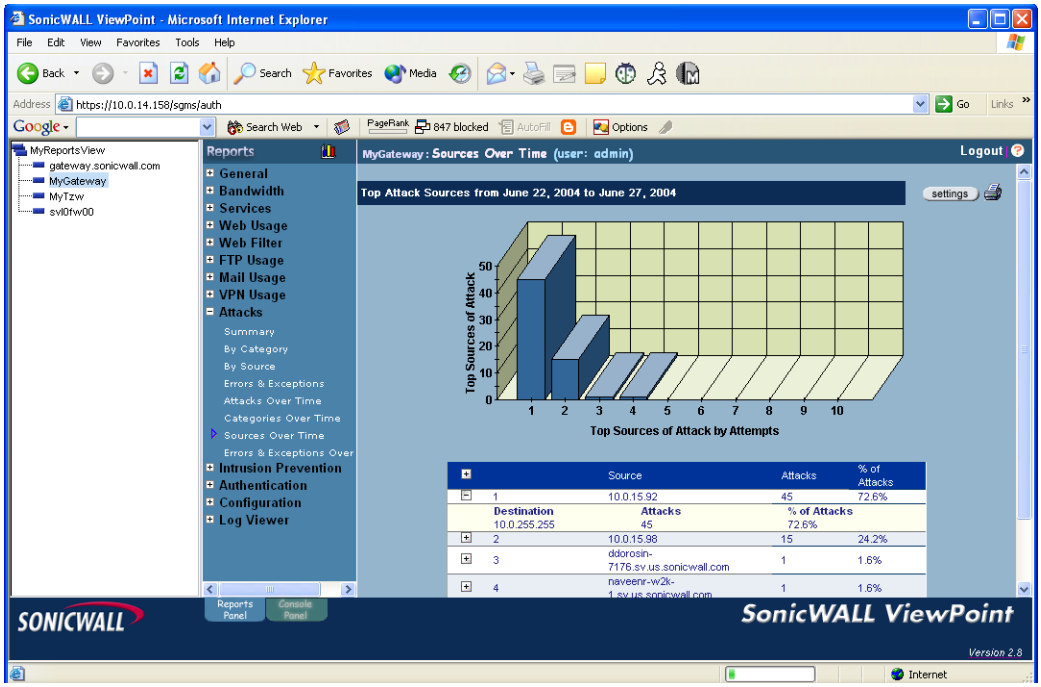
Sources Over Time

The Source Over Time report displays the number of attacks from each major source during the specified time period.

To view the Sources Over Time report, follow these steps:

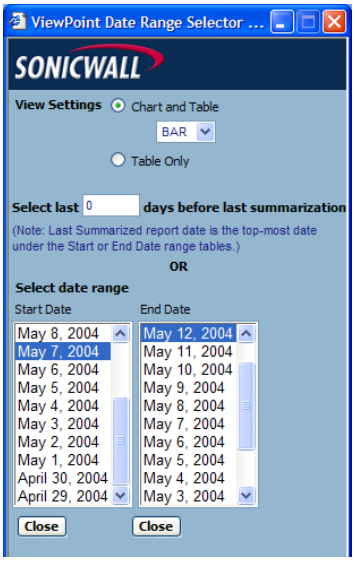
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Attacks tree and click **Sources Over Time**. The Sources Over Time page appears (Figure 124).

Figure 124: Sources Over Time Page



5. The bar graph displays the number of attacks attempted each day of the specified time period. To view source and destination information on the individual attacks, expand the source tree (indicated by a '+' sign).
6. The table contains the following information:
   - **Source**—source of the attack.
   - **Attacks**—number of attacks.
   - **% of Attacks**—percentage of attacks from this source, compared to other sources. For example, if 2,000 attacks occurred during the time period and 1,000 attacks occurred from a source, its **% of Attacks** field will display 50%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 123).

Figure 125: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.
9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

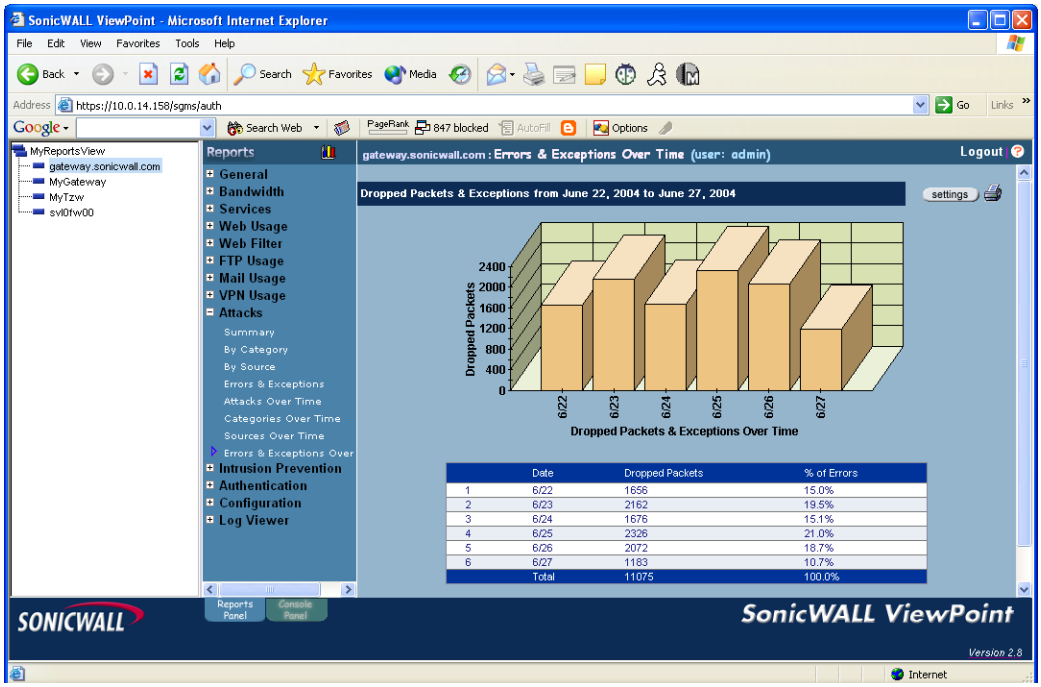
Viewing Errors Over Time

The Errors Over Time report displays the number of errors during the specified time period.

To view the Errors Over Time report, follow these steps:

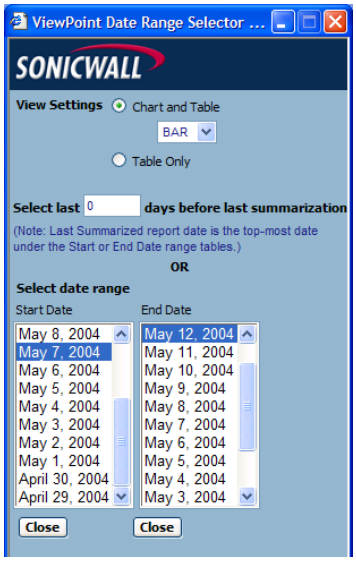
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Attacks tree and click **Errors Over Time**. The Errors Over Time page appears (Figure 126).

Figure 126: Errors Over Time Page



5. The bar graph displays the number of packets that were dropped during each day of the specified time period.
6. The table contains the following information:
   - **Date**—when the sample was taken.
   - **Dropped Packets**—number of dropped packets.
   - **% of Errors**—percentage of dropped packets on this day, compared to the time period. For example, if 10,000 packets were dropped during the time period and 1,000 packets were dropped on Wednesday, its **% of Attacks** field will display 10%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 127).

Figure 127: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.

9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

Note: *These settings will stay in effect for all similar reports during your active login session.*

Viewing Intrusion Prevention Reports

The Intrusion Prevention Service (IPS) reports show the number of attempted intrusions that occurred during the specified time period.

Note: *All reports appear in the Firewall's time zone.*

Select from the following:

- To view a summary of the attacks, see "Viewing the Intrusion Prevention Summary Report" on page 122.
- To view the attacks by attack category, see "Viewing the Intrusions by Destination" on page 123.
- To view the attacks by source IP address, see "Viewing the Attacks by Source" on page 112.
- To view a summary of the errors and exceptions, see "Viewing the Errors and Exceptions Report" on page 113.
- To view attacks over a period of time, see "Viewing Attack Reports Over Time" on page 115.
- To view errors and exceptions over a period of time, see "Viewing Errors Over Time" on page 119.

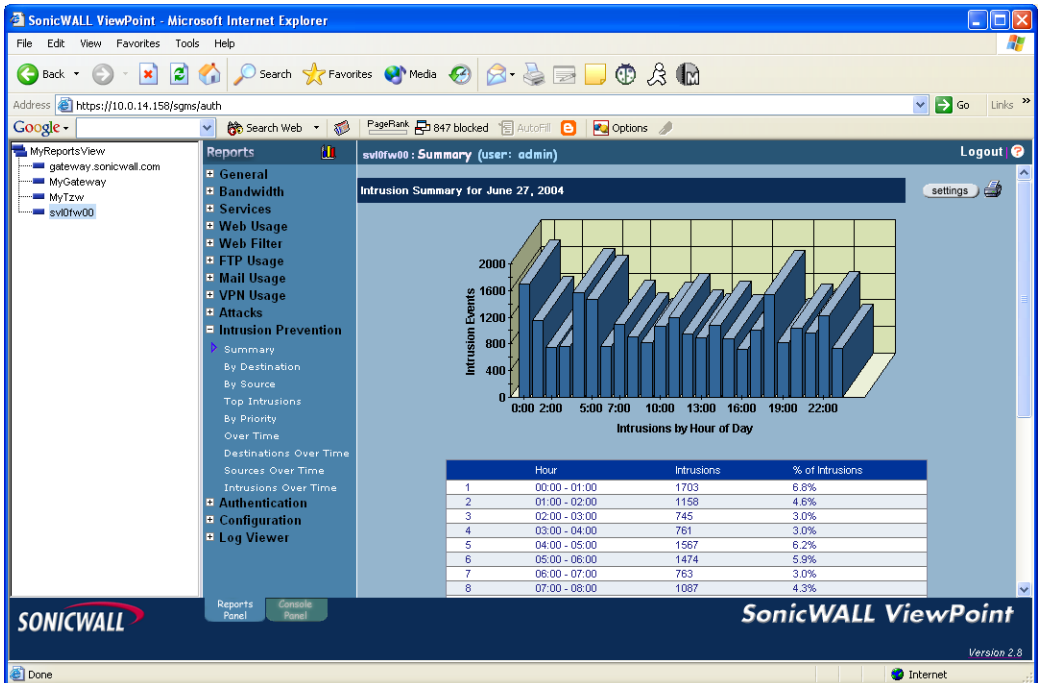
Viewing the Intrusion Prevention Summary Report

The Attack Summary report contains information on the number of attempted intrusions on a SonicWALL appliance or group of SonicWALL appliances during the specified day.

To view the IPS Summary report, follow these steps:

1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Intrusion Prevention tree and click **Summary**. The Summary page appears (Figure 128).

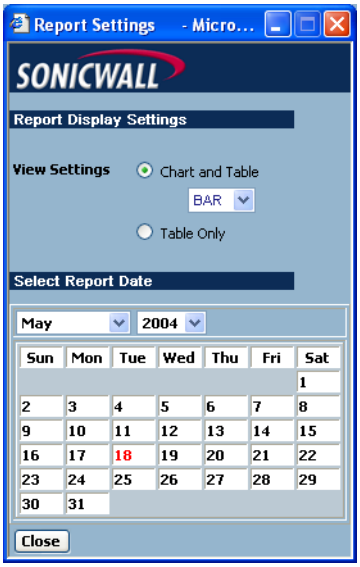
Figure 128: Summary Page



5. The bar graph displays the number of intrusions attempted during each hour of the day. The table contains the following information:
   - **Hour**—when the sample was taken.
   - **Attacks**—number of intrusion attempts.
   - **% of Attacks**—percentage of intrusions during this hour, compared to the day. For example, if 1,000 intrusions occurred during the day and 100 intrusions occurred during the 2:00 time period, the **% of Intrusions** field will display 10%.

6. SonicWALL ViewPoint shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 129).

Figure 129: Report Settings Dialog Box



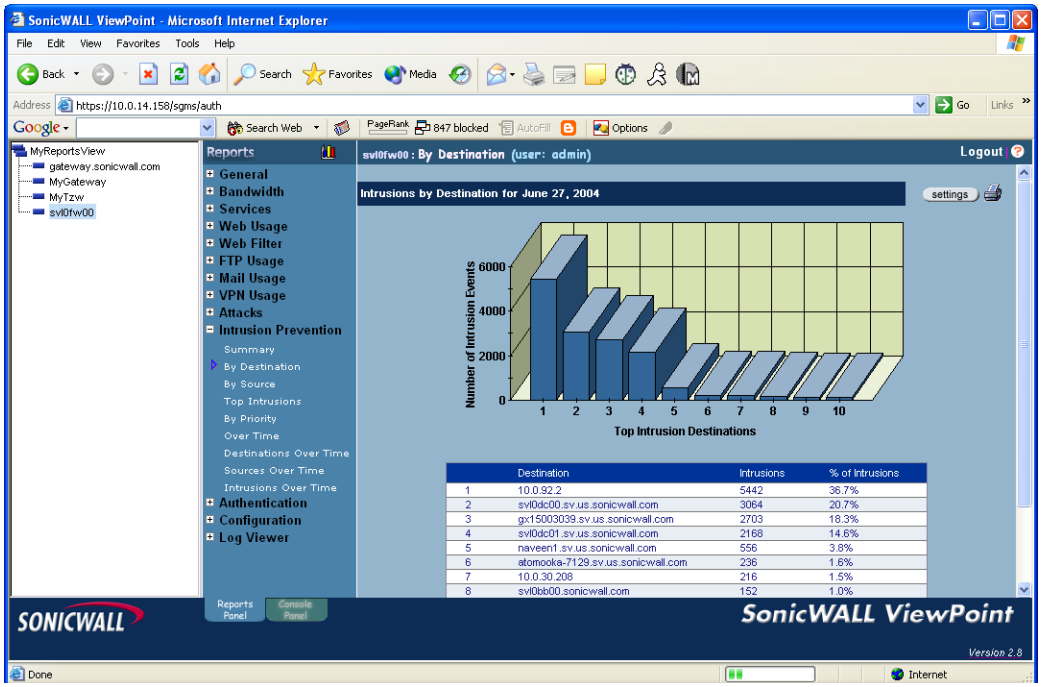
7. Select the type of chart to display from the **View Settings** area.
8. Select the year, month, and day that you would like to view.
9. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

Viewing the Intrusions by Destination

The Intrusions by Destination report displays the top destinations from which intrustions were attempted. To view the Attacks by Destination report, follow these steps:

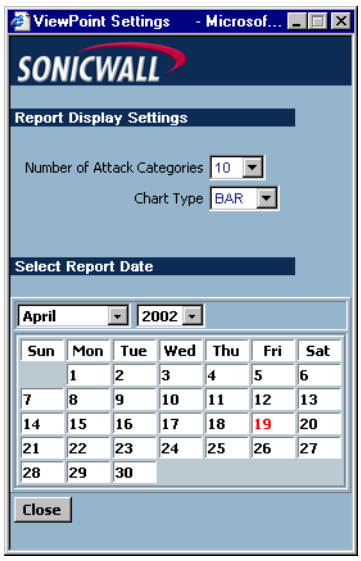
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Intrusion Prevention tree and click **By Destination**. The By Destination page appears (Figure 130).

Figure 130: By Destination Page



5. The pie chart displays the percentage of intrusion attempts that occured from each destination.
6. The table contains the following information:
   - **Destination**—IP address or hostname of the destination.
   - **Intrusions**—number of intrusions.
   - **% of Intrusions**—percentage of intrusions from this destination, compared to all other destinations. For example, if 5,000 intrusion attempts occurred during the day and 500 came from 108.12.11.2, its **% of Intrusions** field will display 10%.
7. By default, SonicWALL ViewPoint shows today's report, a pie chart, and the ten top categories. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 131).

Figure 131: Report Settings Dialog Box



8. Select the number of categories that will be displayed from the **Number of Categories** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.

11. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

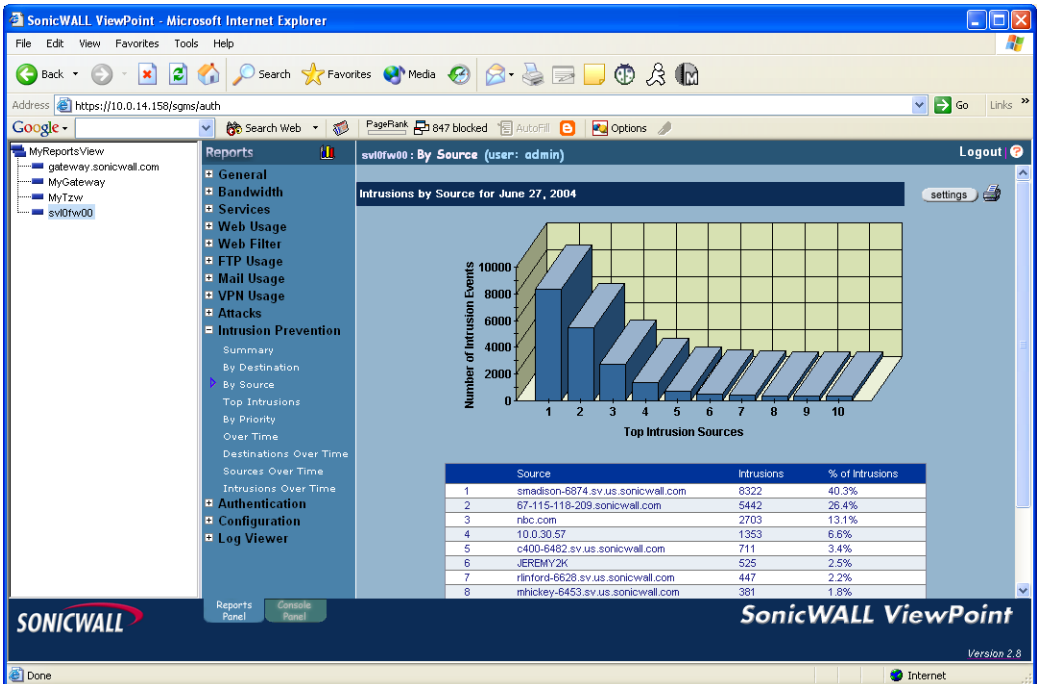
Viewing the Intrusions by Source

The Intrusions by Source report displays the IP addresses of the sources which originated the request that caused an intrusion attempt. For example, if the system at IP address 192.168.1.102 issued a request to the system at 102.1.22.3 and 102.1.22.3 made an intrusion attempt, 192.168.1.102 would be listed as the source in the By Source report.

To view the Intrusions by Source report, follow these steps:

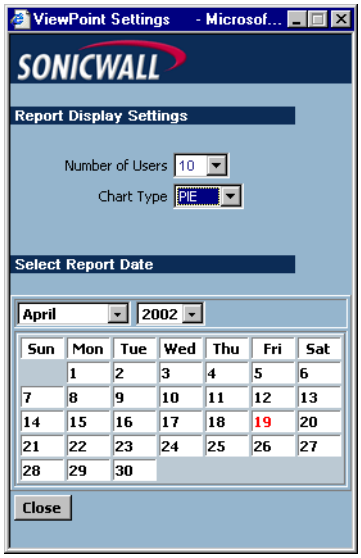
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Intrusion Prevention tree and click **By Source**. The By Source page appears (Figure 132).

Figure 132: By Source Page



5. The pie chart displays the percentage of each source.
6. The table contains the following information:
   - **Source**—the source that made the request.
   - **Intrusion Prevention**—number of intrusions.
   - **% of Intrusions**—percentage of intrusions caused by this source's request, compared to all other sources. For example, if 1,000 intrusion attempts occurred during the day and 500 intrusion attempts came through the activities of one source, its **% of Intrusions** field will display 50%.
7. By default, SonicWALL ViewPoint shows today's report, a pie chart, and the ten top sources. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 133).

Figure 133: Report Settings Dialog Box


ViewPoint Settings - Microsof...
SONICWALL
Report Display Settings
Number of Users 10
Chart Type PIE
Select Report Date
April 2002
Sun Mon Tue Wed Thu Fri Sat
1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30
Close

8. Select the number of sources that will be displayed from the **Number of Sources** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.
11. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

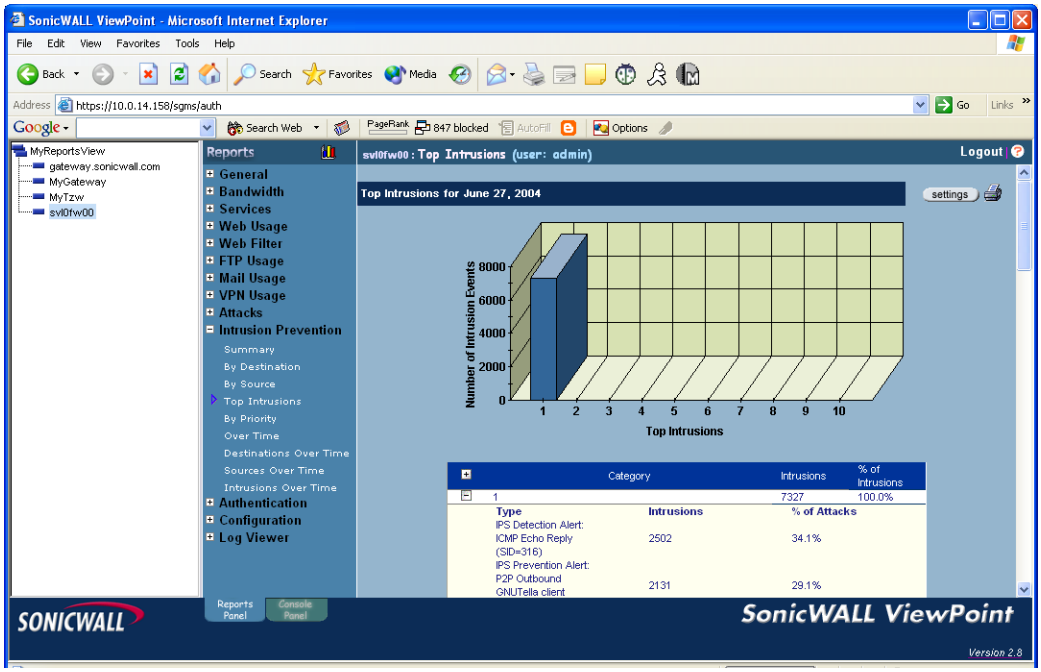
Top Intrusions

The Top Intrusions report displays the types of intrustions that occurred on the specified date.

To view the Top Intrusions report, follow these steps:

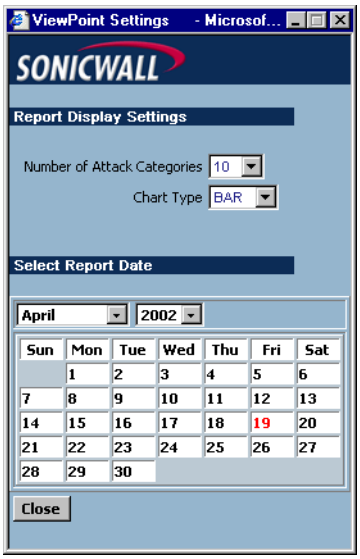
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Intrusion Prevention tree and click **Top Intrusions**. The Top Intrusions page appears (Figure 134).

Figure 134: Top Intrusions Page



5. The pie chart displays the percentage of each type of intrusion attempt. To view source and destination information on the individual intrusion attempts, expand the category tree (indicated by a '+' sign).
6. The table contains the following information:
   - **Category**—the type of intrusion.
   - **Intrusions**—number of intrusion attempts.
   - **% of Intrusions**—percentage of this type of intrusion, compared to all other intrusion types. For example, if 5,000 intrusion attempts occurred during the day and Web IIS attempts makes up 3,000 of the intrusion attempts, its **% of Intrusions** field will display 60%.
7. By default, SonicWALL ViewPoint shows today's report, a pie chart, and the ten top categories. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 135).

Figure 135: Report Settings Dialog Box



8. Select the number of categories that will be displayed from the **Number of Categories** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.

11. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

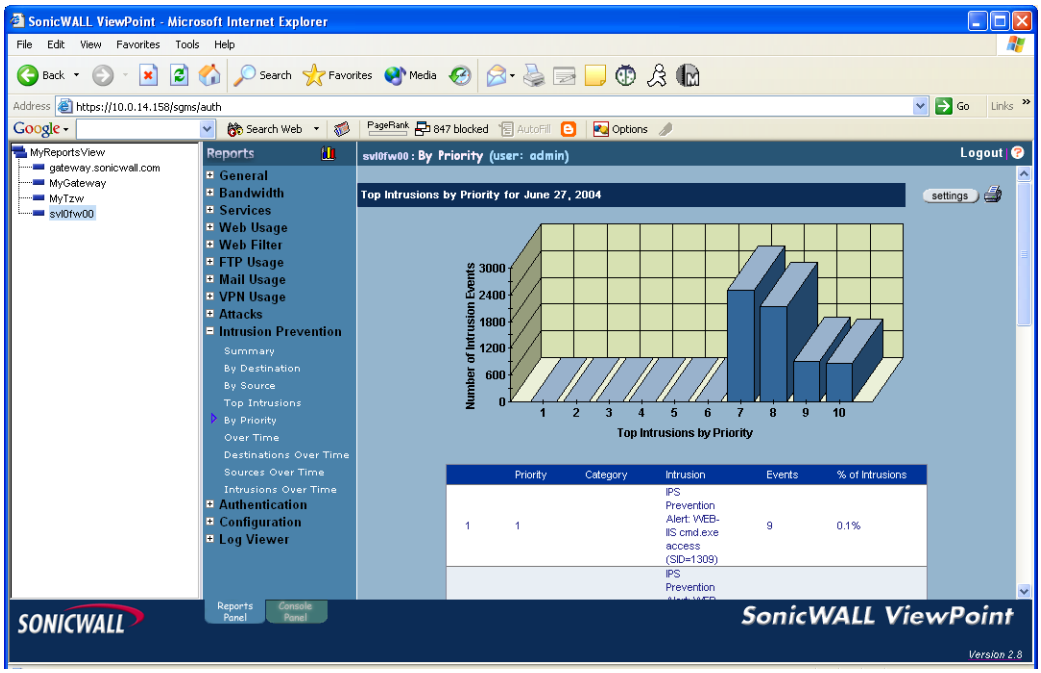
Top Intrusions by Priority

The By Priority report displays the types of intrustions that occurred on the specified date, ranked by Priority.

To view the By Priority report, follow these steps:

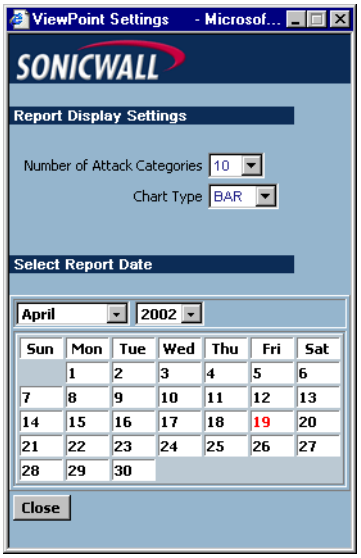
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Intrusion Prevention tree and click **By Priority**. The By Priority page appears (Figure 136).

Figure 136: By Priority Page



5. The pie chart displays the percentage of each type of intrusion attempt. To view source and destination information on the individual intrusion attempts, expand the category tree (indicated by a '+' sign).
6. The table contains the following information:
   - **Priority**—priority level of the intrusion.
   - **Category**—the type of intrusion.
   - **Intrusion**—name of the intrusion.
   - **Events**—number of intrusion attempts.
   - **% of Intrusions**—percentage of this type of intrusion, compared to all other intrusion types. For example, if 5,000 intrusion attempts occurred during the day and Web IIS cmd.exe access attempts makes up 2,000 of the intrusion attempts, its **% of Intrusions** field will display 40%.
7. By default, SonicWALL ViewPoint shows today's report, a pie chart, and the ten top categories. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 137).

Figure 137: Report Settings Dialog Box


ViewPoint Settings - Microsof...
SONICWALL
Report Display Settings
Number of Attack Categories 10
Chart Type BAR
Select Report Date
April 2002
Sun Mon Tue Wed Thu Fri Sat
1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30
Close

8. Select the number of categories that will be displayed from the **Number of Categories** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.
11. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

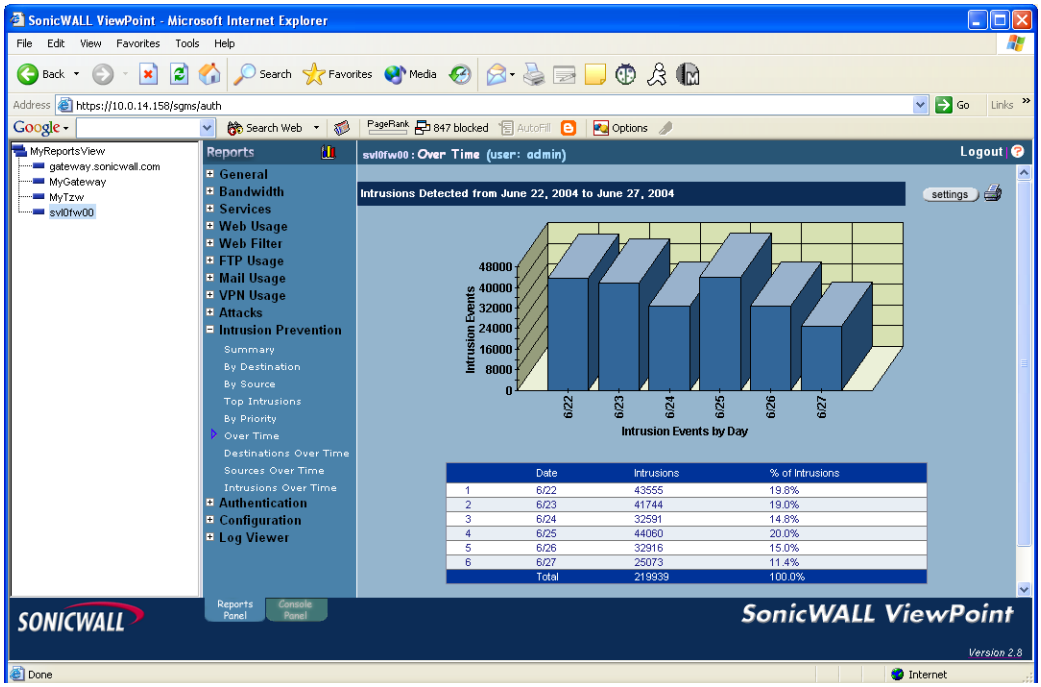
Viewing Intrusions Over Time

The Over Time report displays the daily number of intrusion attempts during the specified time period.

To view the Intrusions Over Time report, follow these steps:

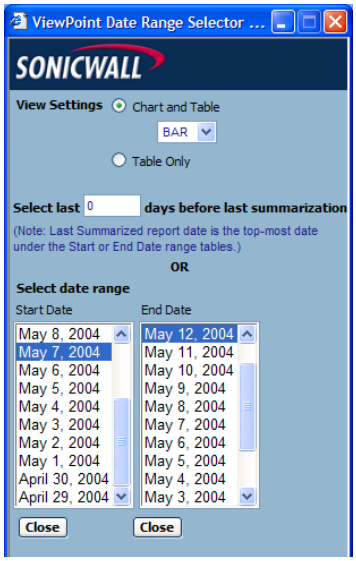
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Intrusion Prevention tree and click **Intrusions Over Time**. The Intrusions Over Time page appears (Figure 138).

Figure 138: Intrusions Over Time Page



5. The bar graph displays the number of intrusions attempted each day of the specified time period.
6. The table contains the following information:
   - **Date**—when the sample was taken.
   - **Intrusions**—number of intrusion attempts.
   - **% of Intrusions**—percentage of intrusion attempts on this day, compared to the time period. For example, if 10,000 intrusion attempts occurred during the time period and 1,000 intrusion attempts occurred on Thursday, its **% of Intrusions** field will display 10%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 139).

Figure 139: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.

9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

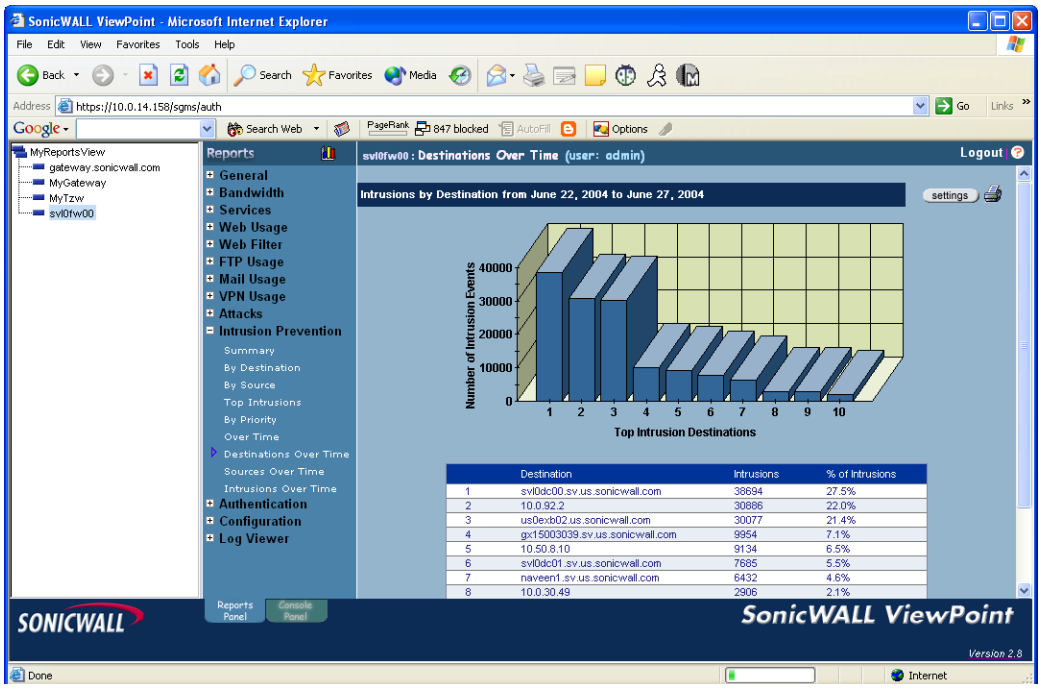
    Note: *These settings will stay in effect for all similar reports during your active login session.*

Viewing Intrusions by Destination Over Time

The Destinations Over Time report displays the top destinations from which intrustions were attempted during the specified time period. To view the Destinations Over Time report, follow these steps:

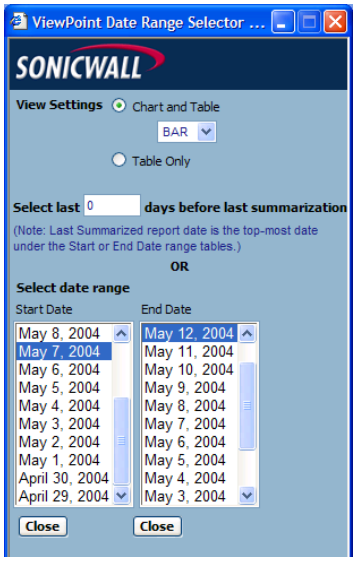
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Intrusion Prevention tree and click **Destinations Over Time**. The Destinations Over Time page appears (Figure 140).

Figure 140: Destinations Over Time Page



5. The bar graph displays the number of attacks attempted each day of the specified time period.
6. The table contains the following information:
   - **Destination**—IP address or hostname of the destination.
   - **Intrusions**—number of intrusions.
   - **% of Intrusions**—percentage of intrusions from this destination, compared to all other destinations. For example, if 5,000 intrusion attempts occurred during this period and 500 came from 108.12.11.2, its **% of Intrusions** field will display 10%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 123).

Figure 141: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.
9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

    Note: *These settings will stay in effect for all similar reports during your active login session.*

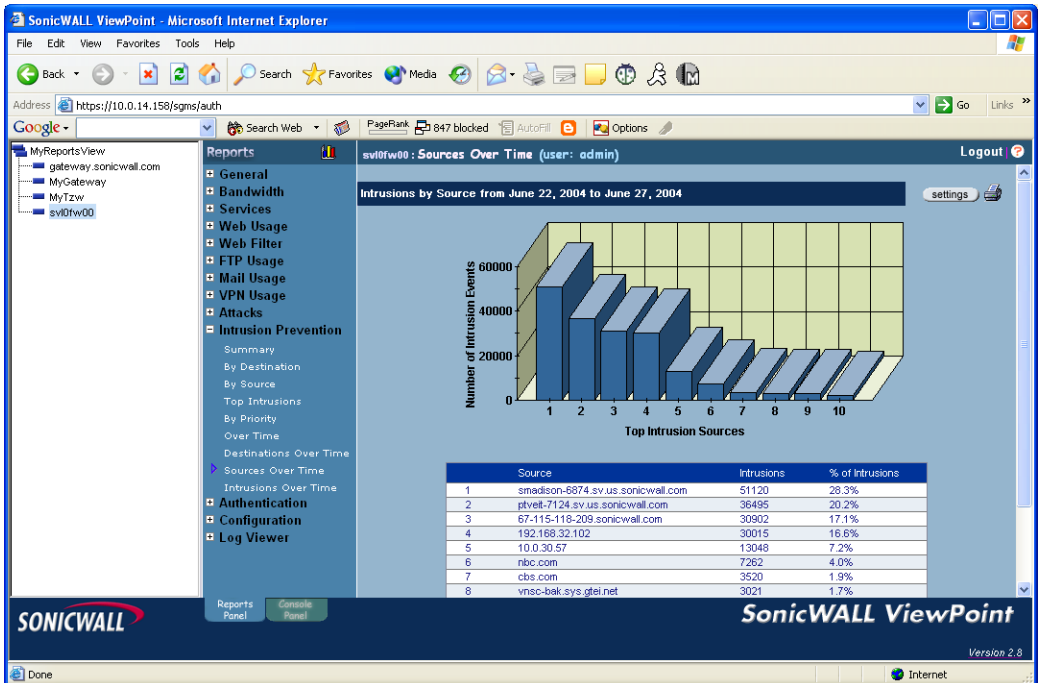
Sources Over Time

The Source Over Time report displays the IP addresses of the sources which originated the request that caused an intrusion attempt. For example, if the system at IP address 192.168.1.102 issued a request to the system at 102.1.22.3 and 102.1.22.3 made an intrusion attempt, 192.168.1.102 would be listed as the source in the Source Over Time report.

To view the Source Over Time report, follow these steps:

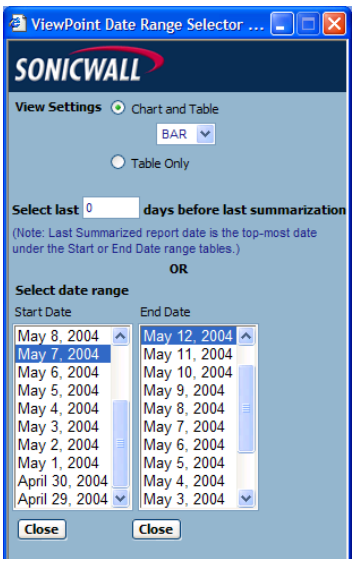
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Intrusion Prevention tree and click **Sources Over Time**. The Sources Over Time page appears (Figure 142).

Figure 142: Sources Over Time Page



5. The pie chart displays the percentage of each source.
6. The table contains the following information:
   - **Source**—the source that made the request.
   - **Intrusions**—number of intrusions.
   - **% of Intrusions**—percentage of intrusions caused by this source's request, compared to all other sources. For example, if 1,000 intrusion attempts occurred during the day and 500 intrusion attempts came through the activities of one source, its **% of Intrusions** field will display 50%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 143).

Figure 143: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.

9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

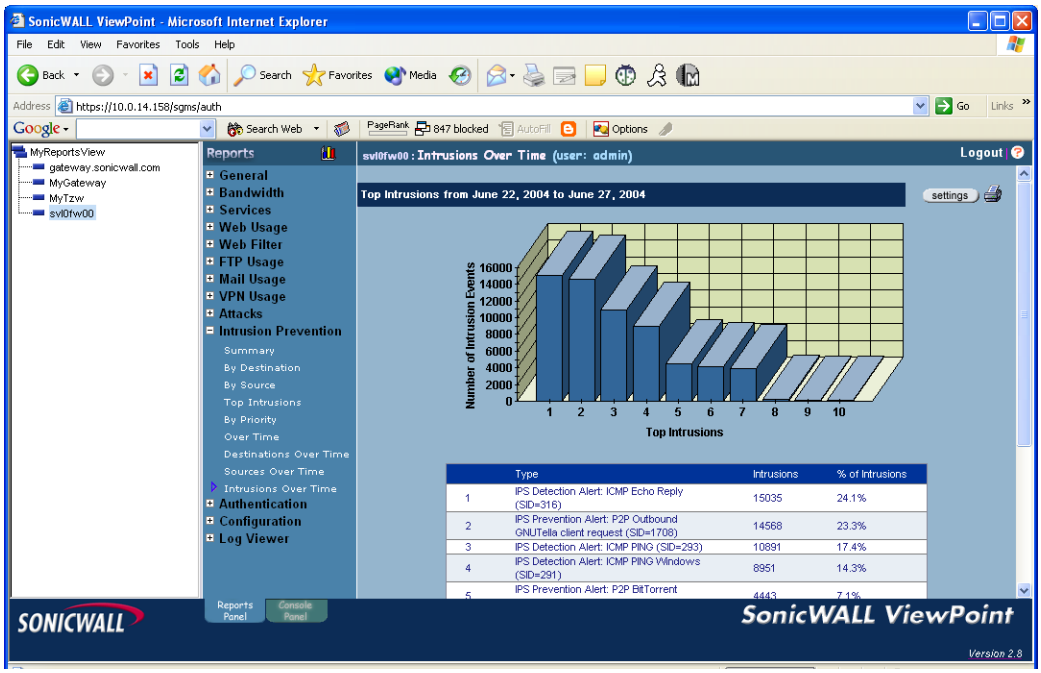
    Note: *These settings will stay in effect for all similar reports during your active login session.*

Top Intrusions Over Time

The Intrusions Over Time report displays the top types of intrustions that occurred during the specified time period. To view the Intrusions Over Time report, follow these steps:

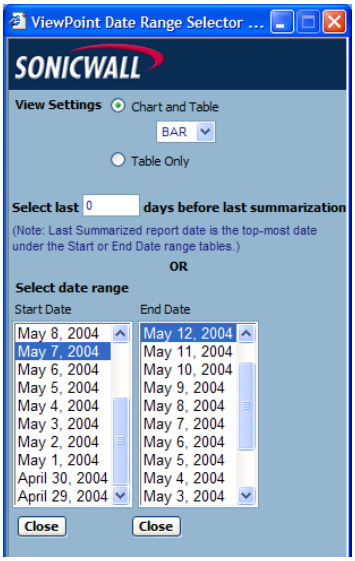
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Intrusion Prevention tree and click **Intrusions Over Time**. The Intrusions Over Time page appears (Figure 144).

Figure 144: Intrusions Over Time Page



5. The pie chart displays the percentage of each type of intrusion attempt.
6. The table contains the following information:
   - **Type**—the type of intrusion.
   - **Intrusions**—number of intrusion attempts.
   - **% of Intrusions**—percentage of this type of intrusion, compared to all other intrusion types. For example, if 5,000 intrusion attempts occurred during the day and Web IIS attempts makes up 3,000 of the intrusion attempts, its **% of Intrusions** field will display 60%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 145).

Figure 145: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.
9. Select from the following:
   - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
   - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected date range.

Note: *These settings will stay in effect for all similar reports during your active login session.*

Viewing Authentication Reports

The login reports show user logins, administrator logins, and failed login attempts for users and administrators.

Note: *All reports appear in the Firewall's time zone.*

Select from the following:

- To view user logins, see "Viewing the User Login Report" on page 136.
- To view administrator logins, see "Viewing the Administrator Login Report" on page 137.
- To view failed login attempts, see "Viewing the Failed Login Report" on page 139.

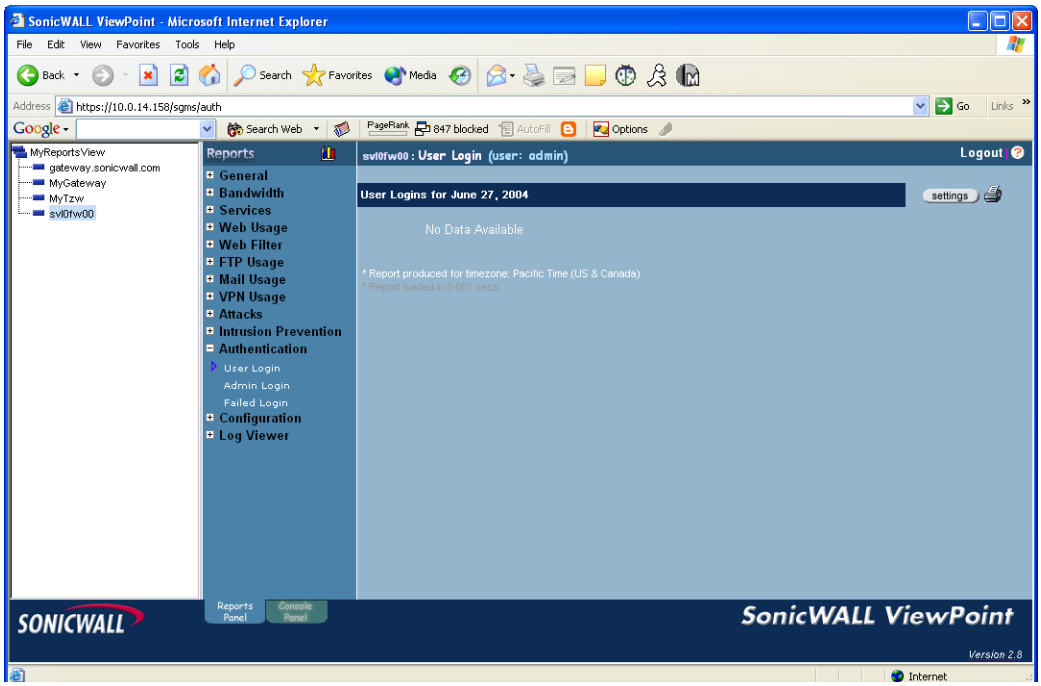
Viewing the User Login Report

The user login report shows users that logged on to the SonicWALL appliance during the specified day to bypass content filtering or to remotely access local network resources.

To view the User Login report, follow these steps:

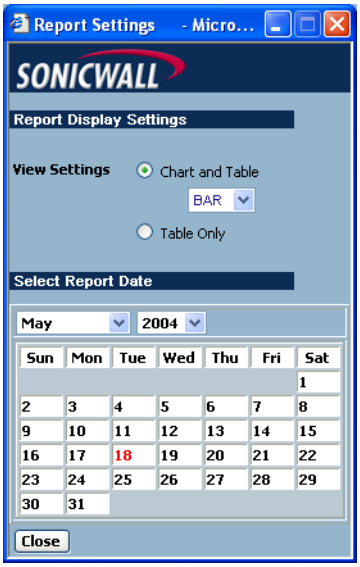
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Authentication tree and click **User Login**. The User Login page appears (Figure 146).

Figure 146: User Login Page



5. The table contains the following information:
   - **User**—the user name.
   - **Time**—time the user logged in.
6. SonicWALL ViewPoint shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 147).

Figure 147: Report Settings Dialog Box



7. Select the type of chart to display from the **View Settings** area.
8. Select the year, month, and day that you would like to view.
9. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

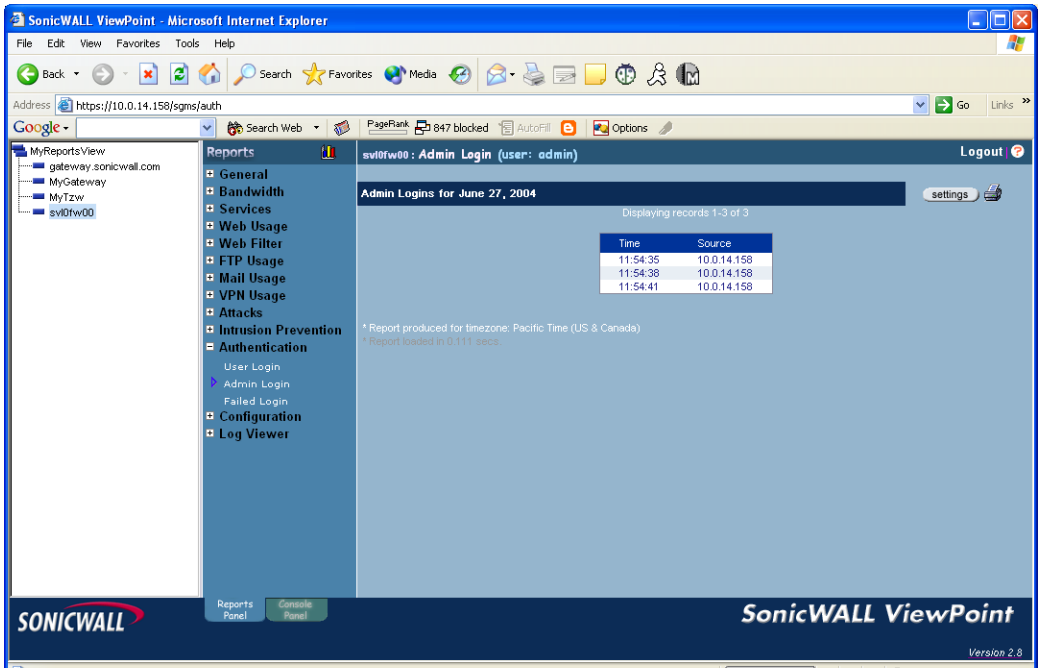
Viewing the Administrator Login Report

The administrator login report shows successful administrator logins during the specified day. This report is useful for identifying misuse and unauthorized management of a SonicWALL appliance.

To view the Admin Login report, follow these steps:

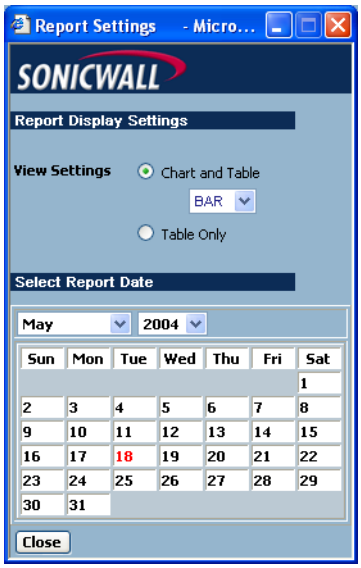
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Authentication tree and click **Admin Login**. The Admin Login page appears (Figure 148).

Figure 148: Admin Login Page



5. The table contains the following information:
   - **User**—the user name.
   - **Time**—time the user logged in.
6. SonicWALL ViewPoint shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 149).

Figure 149: Report Settings Dialog Box



7. Select the type of chart to display from the **View Settings** area.
8. Select the year, month, and day that you would like to view.
9. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

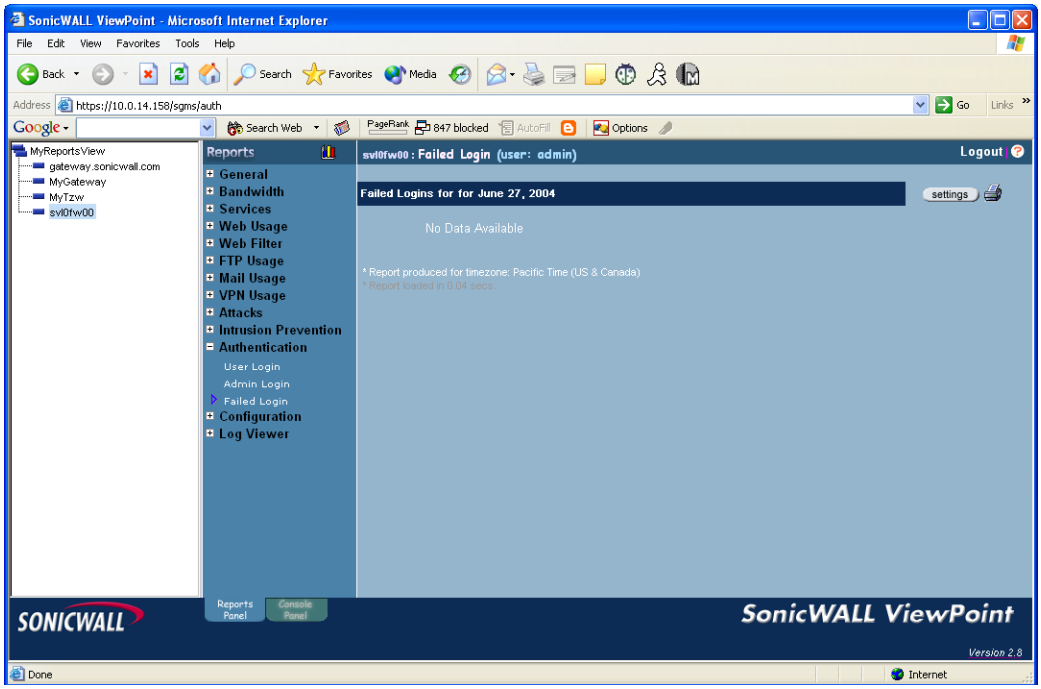
Viewing the Failed Login Report

The failed login reports shows failed login attempts for users and administrators that attempted to log on to the SonicWALL appliance during the specified day. This report is useful for identifying unauthorized access attempts and potentially malicious activity.

To view the Failed Login report, follow these steps:

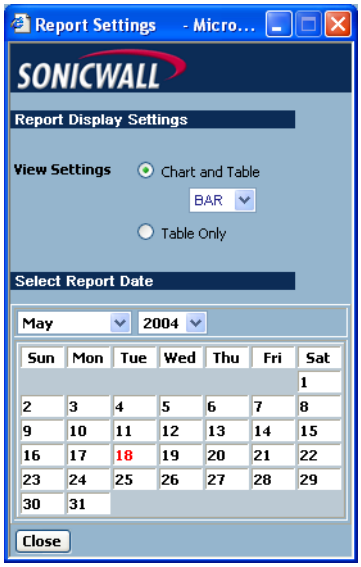
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Authentication tree and click **Failed Login**. The Failed Login page appears (Figure 150).

Figure 150: Failed Login Page



5. The table contains the following information:
   - **User**—the user name.
   - **Time**—time the user logged in.
   - **IP Address**—IP address of the user.
6. SonicWALL ViewPoint shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 151).

Figure 151: Report Settings Dialog Box



7. Select the type of chart to display from the **View Settings** area.
8. Select the year, month, and day that you would like to view.
9. When you are finished, click **Close.** SonicWALL ViewPoint displays the report for the selected day.

Viewing the Log

The Log Viewer contains detailed information on each transaction that occurred on the SonicWALL appliance. This information is stored for the time that you specified in the configuration settings.

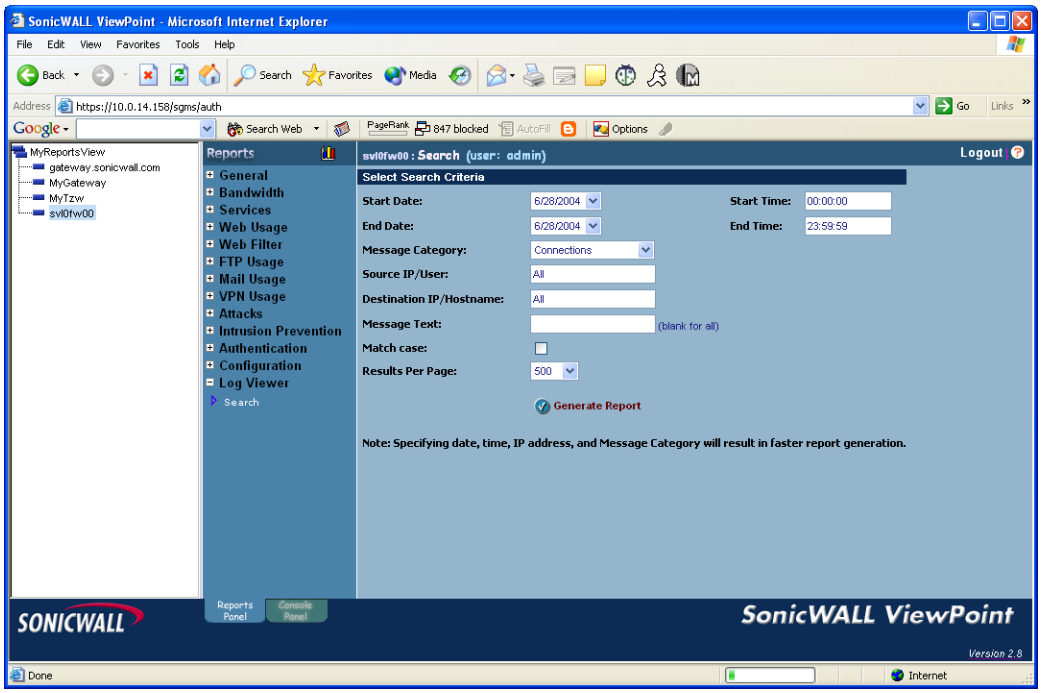
Note: *The Log Viewer displays raw log information for every connection. Depending on the amount of traffic, this can quickly consume a large amount of space in the database. It is highly recommended to be careful when choosing the number of days of information that will be stored. For more information, see "Configuring Reporting Settings" on page 35.*

Viewing the Log for a SonicWALL Appliance

To view the Log, follow these steps:

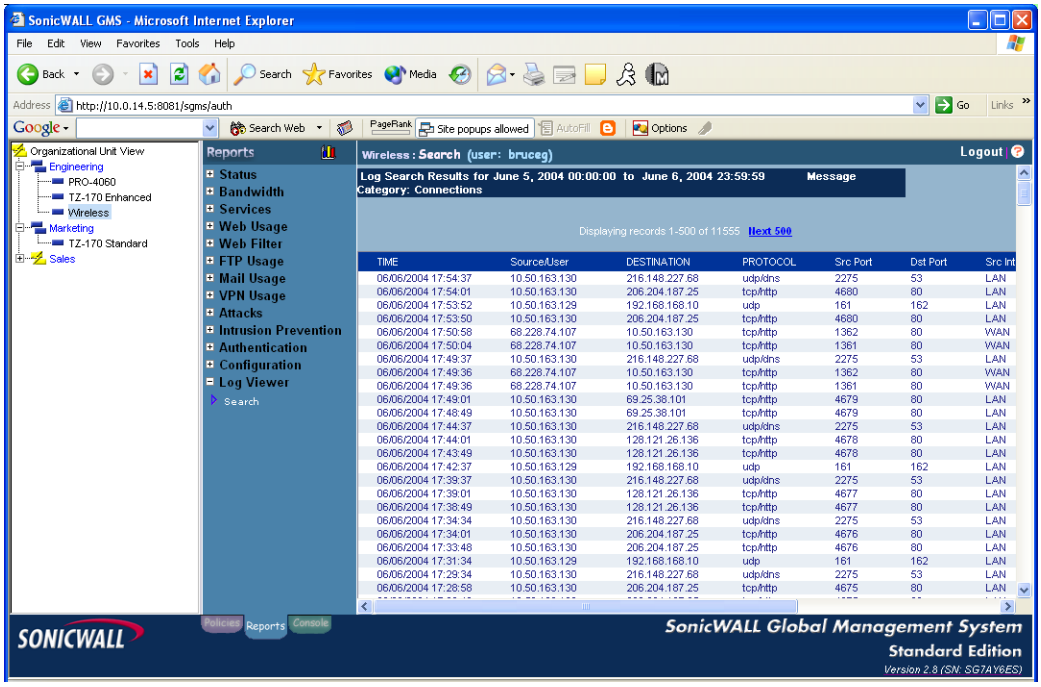
1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Log Viewer tree and click **Search**. The Search page appears (Figure 152).

Figure 152: Search Page



5. Select the date to view from the **Date** list box.
6. Enter the starting time of events to view in the **Start Time** field.
7. Enter the ending time of events to view in the **End Time** field.
8. Select the type of events to view from the **Message Category** list box.
9. Enter the source IP address to view in the **Source IP Address** field. To view all IP addresses, enter All.
10. Enter the destination IP address to view in the **Destination IP Address** field. To view all IP addresses, enter All.
11. Select the number of entries to display per page from the **Results Per Page** field.
12. Click **Generate Report**. The Log Viewer Results page appears (Figure 153).

Figure 153: Log Viewer Results Page



13. Search through the entries to find the information for which you are searching. To view the next page of entries, click **Next**.
14. To generate another report, click **Search** again in the Log Viewer Tree.

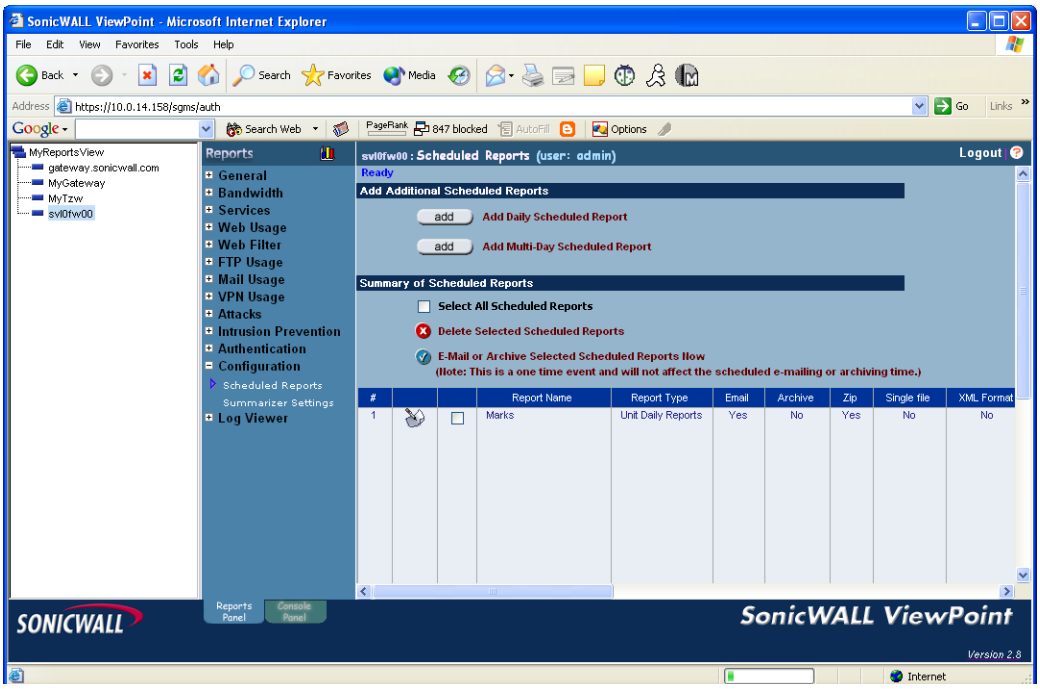
Scheduling SonicWALL ViewPoint

SonicWALL ViewPoint can automatically send reports to any e-mail addresses that you specify.

To view currently scheduled reports or configure new reports, follow these steps:

1. Start and log into SonicWALL ViewPoint.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Configuration tree and click **Scheduled Reports**. The Scheduled Reports page appears (Figure 154).

Figure 154: Scheduled Reports Page



5. The Scheduled Reports page contains a list of currently scheduled reports. To edit a report, select its radio button and click **Edit**. To delete a report, select its radio button and click **Delete**.
6. To e-mail a currently scheduled report now, click **E-mail Reports Now**.

   Note: *Scheduled reports will send data for the previous day, week, or month. If you click* ***E-mail Reports Now****, information for the current period will be reported, based on the most recently summarized data. This will not affect the normally scheduled report.*

   Select from the following:

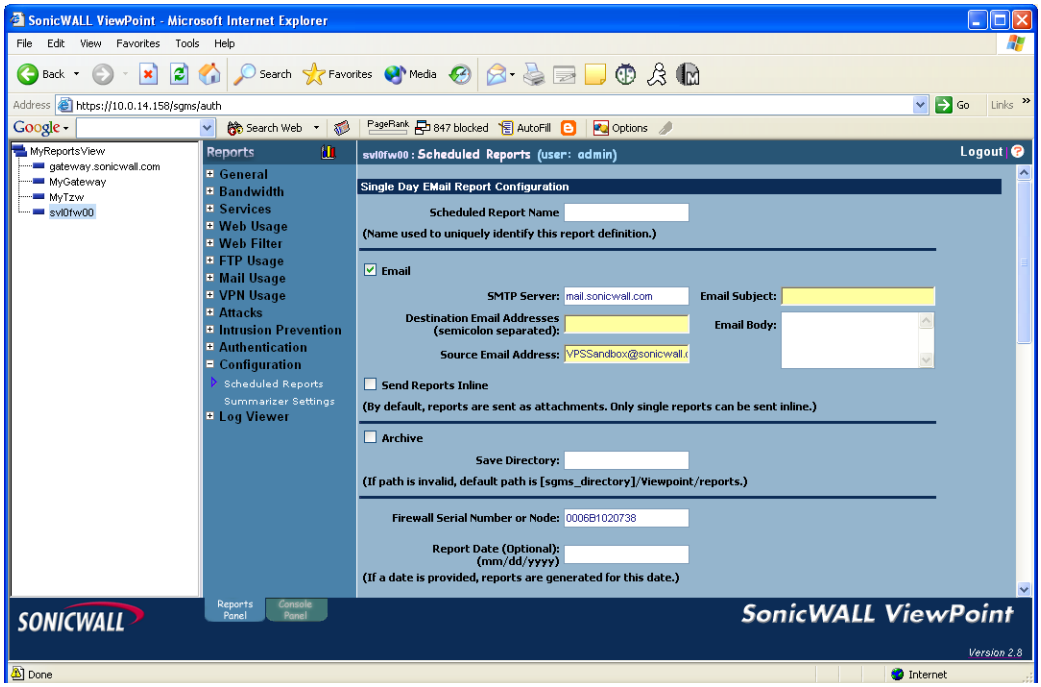
   - To create a new daily report, see “Scheduling a Daily Report” on page 144.
   - To create a new weekly or monthly report, see “Scheduling a Weekly or Monthly Report” on page 146.

Scheduling a Daily Report

By default, daily reports are sent out once a day at 03:00 GMT and contain information for the previous day. To change when they are sent, see “Configuring Email/Archive Settings” on page 22. To configure a new daily report, follow these steps:

1. From the Scheduled Reports page, click the **Add Daily Report** button. The Daily Reports page appears (Figure 155).

   Figure 155: Daily Reports Page



2. Enter a name for the report in the **Scheduled Report Name** field.
3. To send the report, select the **Email** check box.
4. By default, the SonicWALL ViewPoint will use the Simple Mail Transfer Protocol (SMTP) server that was specified during installation. To change it, enter the IP address or hostname of the SMTP server in the **SMTP Server Address** field.
5. Enter the Destination e-mail addresses in the **Destination Email Addresses** field. Make sure each e-mail address is separated by a semicolon (;).
6. By default, SonicWALL ViewPoint will use the e-mail address of the user logged into SonicWALL ViewPoint as the Sender e-mail address. To change it, enter a new Sender e-mail address in the **Source Email Address** field.
7. Enter the Subject Line that will appear in reports sent from SonicWALL ViewPoint in the **Email Subject** field.
8. Enter text that will appear in the message body in the **Email Body** field.
9. To copy the contents of the report into the body of the email message, select the **Send Reports Inline** check box. To send the file as an email attachment, make sure this check box is deselected.

   Note: *Reports can only be sent inline when all data is sent in a single report.*

10. To archive the file on the server’s hard disk, select the **Archive** check box and enter a path in the **Save Directory** field.

    Specify the directory where the file will be archive in the **Save Directory** field.

11. **Optional.** To specify a specific date, enter the date in the **Report Date** field.
12. If you are using custom reports, specify the folder location of the template files in the **Template Folder Name** field. For more information, see Appendix B, “Customized Reports.”
13. To compress the reports into a single file, select the **Zip Reports into a single file** check box.
14. To include all of the data in a single report, select the **Include all data in a single report** check box.

15. To password-protect the Zip file, select the **Password Protect the Zip File** check box and enter the password in the **Password** field.
16. To only display data for a specified group of web sites or users, enter the URL of each site and username of each user (separated by commas) in the **User/Server Filter** field. Because this field uses pattern matching, entries such as "yahoo.com" will display data for mail.yahoo.com and shopping.yahoo.com. Entries such as "john" will display data for johnm, 123john, and so on.
17. Select the daily reports that will be included in the e-mail message:
    - **User Login**—shows users that logged on to the SonicWALL appliance to bypass content filtering or to remotely access local network resources.
    - **Admin Login**—shows successful administrator logins for the SonicWALL appliance.
    - **Failed Login**—shows failed login attempts for users and administrators that attempted to log on through the SonicWALL appliance.
    - **Status Summary**—status of the SonicWALL appliance during each hour.
    - **Bandwidth Summary**—amount of traffic handled by the SonicWALL appliance during each hour.
    - **Bandwidth Top Users**—displays the users who used the most bandwidth.
    - **Service Summary**—amount of traffic handled by each service during each hour.
    - **VPN Summary**—amount of VPN traffic handled by the SonicWALL appliance during each hour.
    - **VPN Top Users**—displays the users who used the most VPN bandwidth.
    - **VPN By Policy**—displays VPN usage by policy.
    - **VPN By Policy hourly**—displays hourly VPN usage by policy.
    - **VPN By Service**—displays VPN usage by service.
    - **Web Usage Summary**—amount of HTTP bandwidth handled by the SonicWALL appliance during each hour of the day.
    - **Web Usage Top Sites**—displays the web sites that used the most HTTP bandwidth.
    - **Web Usage Top Users**—displays the users who used the most HTTP bandwidth.
    - **Web Usage Sites By User, By Site**—displays a list of all users, their top sites, the number of hits to each site, and the amount of data transferred.
    - **Web Filter Summary**—displays the number of times users attempt to access blocked sites during each hour.
    - **Web Filter Top Sites**—displays the top blocked web sites that users attempted to access.
    - **Web Filter Top Users**—displays the users who made the most attempts to access blocked sites.
    - **Web Filter Sites By User, By Site**—displays a list of all users, their top sites, and the number of attempts that were made to access each site.
    - **FTP Usage Summary**—amount of FTP bandwidth handled by the SonicWALL appliance.
    - **FTP Usage Top Users**—displays the users who used the most FTP bandwidth.
    - **Mail Usage Summary**—amount of mail handled by the SonicWALL appliance.
    - **Mail Usage Top Users**—displays the users who sent and received the most mail.
    - **Attacks Summary**—number of attack attempted on the SonicWALL appliance.
    - **Attacks By Category**—displays the attacks that occurred, sorted by category.
    - **Attacks By Source**—displays the top sources of attacks.
    - **Attacks Errors and Exceptions**—number of errors and exceptions on the SonicWALL appliance.
    - **Intrusion Summary**—number of intrusions attempted on the SonicWALL appliance.
    - **Intrusions By Category**—displays the intrusion attempts that occurred, sorted by category.
    - **Intrusions By Source**—displays the top source that generated intrusion attempts.
    - **Intrusions By Destinaton**—displays the top destinations that generated intrusion attempts.
18. When you are finished, click **Add**. The new report will appear in the list on the Scheduled Reports page.

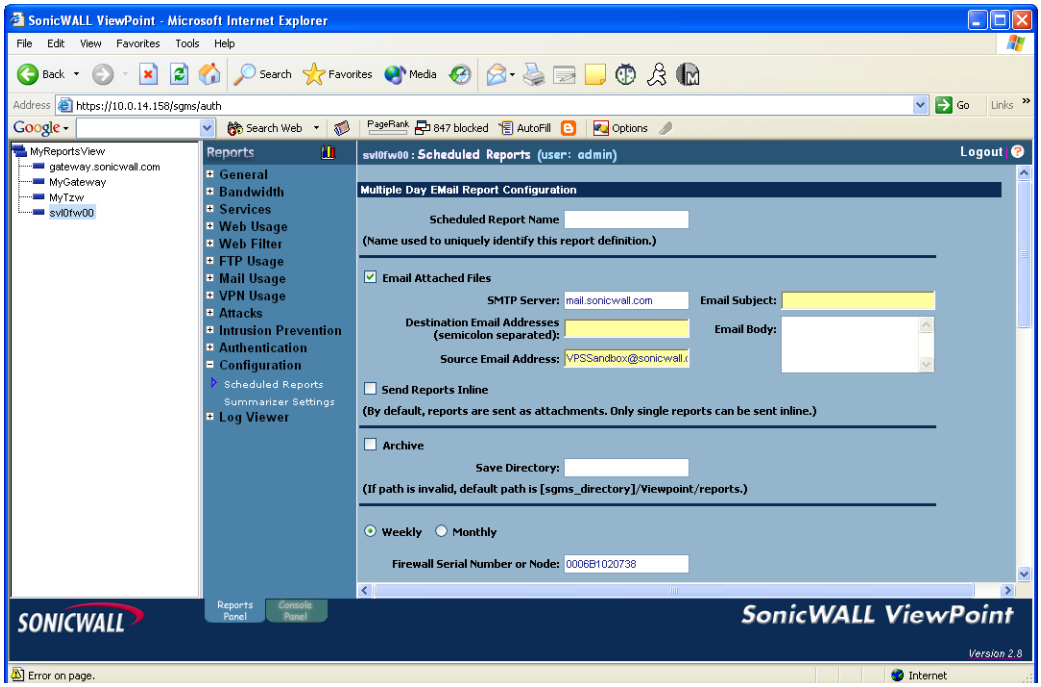
    Note: *The report will run based on the settings that you specified and will use the default display settings. To change the display settings, see "Configuring Presentation Options" on page 24.*

Scheduling a Weekly or Monthly Report

By default, weekly reports are sent out every Monday at 03:00 GMT and contain information for the previous week. Monthly reports are sent out on the second day of every month at 03:00 GMT and contain information for the previous month. To change when they are sent, see “Configuring Email/Archive Settings” on page 22. To configure a new weekly or monthly report, follow these steps:

1. From the Scheduled Reports page, click the **Add Multi-Day Report** button. The Multi-Day Reports page appears (Figure 156).

   Figure 156: Multi-Day Reports Page



2. Enter a name for the report in the **Scheduled Report Name** field.
3. To send the report, select the **Email** check box.
4. By default, SonicWALL ViewPoint will use the Simple Mail Transfer Protocol (SMTP) server that was specified during installation. To change it, enter the IP address or hostname of the SMTP server in the **SMTP Server Address** field.
5. Enter the Destination e-mail addresses in the **Destination Email Addresses** field. Make sure each e-mail address is separated by a semicolon (;).
6. By default, SonicWALL ViewPoint will use the e-mail address of the user logged into SonicWALL ViewPoint as the Sender e-mail address. To change it, enter a new Sender e-mail address in the **Source Email Address** field.
7. Enter the Subject Line that will appear in reports sent from SonicWALL ViewPoint in the **Email Subject** field.
8. Enter text that will appear in the message body in the **Email Body** field.
9. To copy the contents of the report into the body of the email message, select the **Send Reports Inline** check box. To send the file as an email attachment, make sure this check box is deselected.

   Note: *Reports can only be sent inline when all data is sent in a single report.*

10. To archive the file on the server’s hard disk, select the **Archive** check box and enter a path in the **Save Directory** field.

    Specify the directory where the file will be archive in the **Save Directory** field.

11. Select whether the report will be sent **Weekly** or **Monthly**.
12. **Optional.** To specify a specific date, enter the date in the **Report Date** field.
13. If you are using custom reports, specify the folder location of the template files in the **Template Folder Name** field. For more information, see Appendix B, “Customized Reports.”
14. To compress the reports into a single file, select the **Zip Reports into a single file** check box.

15. To include all of the data in a single report, select the **Include all data in a single report** check box.
16. To password-protect the Zip file, select the **Password Protect the Zip File** check box and enter the password in the **Password** field.
17. To only display data for a specified group of web sites or users, enter the URL of each site and username of each user (separated by commas) in the **User/Server Filter** field. Because this field uses pattern matching, entries such as "yahoo.com" will display data for mail.yahoo.com and shopping.yahoo.com. Entries such as "john" will display data for johnm, 123john, and so on.
18. Select the reports that will be included in the e-mail message:
    - **Status Over Time**—displays the status of the SonicWALL appliance for the week or month.
    - **Bandwidth Over Time**—displays the daily amount of traffic handled by the SonicWALL appliance for the week or month.
    - **Bandwidth Top Users Over Time**—displays the top users of bandwitdth handled by the SonicWALL appliance for the week or month.
    - **Web Usage Over Time**—displays the daily amount of HTTP bandwidth handled by the SonicWALL appliance for the week or month.
    - **Web Usage Top Sites Over Time**—displays the top sites for the week or month.
    - **Web Usage Top Users Over Time**—displays the top users for the week or month.
    - **Web Usage By Users Over Time**—displays the web usage by users for the week or month.
    - **Web Filter Over Time**—displays the number of attempts that were made to access blocked web sites for the week or month.
    - **Web Filter Top Sites Over Time**—displays the top filtered sites for the week or month.
    - **Web Filter Top Users Over Time**—displays the top users trying to access filtered sites for the week or month.
    - **Web Filter By Users Over Time**—displays web filtering by user for the week or month.
    - **FTP Usage Over Time**—displays the daily amount of FTP bandwidth handled by the SonicWALL appliance for the week or month.
    - **FTP Usage Top Users Over Time**—displays the top FTP users for the week or month.
    - **Mail Usage Over Time**—displays the daily amount of mail handled by the SonicWALL appliance for the week or month.
    - **Mail Usage Top Users Over Time**—displays the top Mail users for the week or month.
    - **Attacks Over Time**—displays the daily number of attacks attempted during the week or month.
    - **Attacks Categories Over Time**—displays the attacks that occurred during the week or month, sorted by category.
    - **Attacks Sources Over Time**—displays the top sources of attacks during the week or month.
    - **Attacks Errors and Exceptions Over Time**—number of errors and exceptions on the SonicWALL appliance during the week or month.
    - **VPN Usage Over Time**—displays daily number of VPN connections during the week or month.
    - **VPN Usage Top Users Over Time**—displays the users who used the most VPN bandwidth during the week or month.
    - **Drop Packets Over Time**—displays the number of packet errors during the week or month.
    - **VPN By Policy Over Time**—displays VPN usage by policy during the week or month.
    - **Intrusions Over Time**—number of intrusions attempted on the SonicWALL appliance during the week or month.
    - **Intrusions By Categories Over Time**—displays the intrusion attempts that occurred during the week or month, sorted by category.
    - **Intrusions By Sources Over Time**—displays the top source that generated intrusion attempts during the week or month.
    - **Intrusions By Destinatons Over Time**—displays the top destinations that generated intrusion attempts during the week or month.
19. When you are finished, click **Add**. The new report will appear in the list on the Scheduled Reports page.

Technical Tips

Uninstalling the ViewPoint Web Server from the DOS Prompt

To uninstall the SonicWALL ViewPoint Web Server from the DOS prompt, change to the `<sgms_directory>:\Tomcat\bin` directory and enter the following command:

```
service -uninstall 'ViewPoint Web Server'
```

Changing the ViewPoint Web Server Port Number

During installation, you can specify a different port number for the ViewPoint Web Server. To do so, follow these steps:

1. Open the following file:

   <*viewpoint_directory*>:/Tomcat/conf/server.xml

2. Locate the following line:

   `Parameter name="port" value="80"`

3. Change the default value of 80 to another port number:
4. Save the file and exit.

Changing the SonicWALL ViewPoint IP Address

If you changed the IP address of the SonicWALL ViewPoint server, follow these steps:

1. Stop all SonicWALL ViewPoint services.
2. Execute the following SQL commands from a DOS window:

   ```
   osql -U <userid> -P <password> -Q "update sgmsdb.dbo.schedulers set ipAddress = 'new ip' where ipAddress = 'old ip'"
   ```

3. Restart all SonicWALL ViewPoint services.

Changing the Default Syslog Server Port Number

By default, the SonicWALL ViewPoint syslog server default port number is 514 on Windows systems. To change the port, follow these steps:

1. Open the viewpointConfig.xml file with a text editor.
2. Add the following line to the end of the file before the </Configuration> section:

   `Parameter name="syslog.syslogServerPort" value="`*port_number*`"`

   where *port_number* is the new port number.

3. Save the file and exit.

The sgmsConfig.xml File

SonicWALL ViewPoint stores its configuration information in the sgmsConfig.xml file.

The following table contains the contents of the sgmsConfig.xml file. Each of these parameters was configured during installation or can be configured from the SonicWALL ViewPoint UI.

Table 1: The sgmsConfig.xml File

LANGUAGE	Specifies the language used by SonicWALL ViewPoint (default: en).
COUNTRY	Specifies the country (default: US).
debug	Specifies the debugging level (Levels 0, 1, 2, or 3). The default setting 0 specifies no debugging.
installDir	Specifies where SonicWALL ViewPoint is installed.
dbtype	Specifies the type of database used.
dbhost	Specifies the IP address of the database server.
dbport	Specifies the database port.
dbname	Specifies the database name. This is encrypted using Tiny Encryption technology.
dbuser	Specifies the database username. This is encrypted using Tiny Encryption technology.
dbowner	Specifies the database owner. This is encrypted using Tiny Encryption technology.
datasource	Specifies the data source.
dbpassword	Specifies the database password. This is encrypted using Tiny Encryption technology.
dbconnections	Number of database connections (default:20).
dbdriver	Specifies the database driver.
dburl	Specifies the URL of the database.
syslog.syslogParserPort	Internal use only.
syslog.syslogServerPort	Internal use only.
syslog.launchSyslogServer	Internal use only.
syslog.forwardToHost	Specifies another host that will receive syslog messages.
syslog.forwardToHostPort	Specifies the port of the host that will receive syslog messages.

The SonicWALL ViewPoint Log Files

SonicWALL ViewPoint provides a number of log files that can be used for troubleshooting. These files are located in the SonicWALL ViewPoint Logs directory and include:

- msde.log—MSDE database log
- phase2install.log—Phase 2 Installation log
- viewpointWebServerLog.txt—Web Server log
- tomcaterr.log—Tomcat log
- tomcatout.log—Tomcat log
- vpSummarizerDbg.txt—Summarizer log in debug mode
- vpSummarizerLog.txt—Summarizer log in non-debug mode

The following log files are also available:

- <viewpoint_directory>\SonicWALL_ViewPoint_2.0_installLog.log—Phase 1 Installation log
- C:\ViewPoint20_uninstall.log—Uninstall log

Encrypting the sgmsConfig.xml File

To encrypt text for use in the sgmsConfig.xml and web.xml files, do the following:

1. Navigate to the <*viewpoint_directory*>:\bin folder.
2. Enter the following command:

   java -cp . TEAV *text*

   where *text* is the text string to encrypt.

   The encrypted string is returned.
3. Add the encrypted string to the sgmsConfig.xml or web.xml file.

Note: *This procedure only performs encryption.*

Encrypted Data in the sgmsConfig.xml File

The sgmsConfig.xml and web.xml files contain encrypted data. The following information is encrypted using Tiny Encryption technology:

- Database Password
- Database Name
- Database Username
- Database Owner

Resetting the Admin Password

To reset the admin user's password to default value of 'password', enter the following from the command-line prompt:

```
osql -U DBuser -P DBpassword -q "exit(update sgmsdb.dbo.users set password =
'5f4dcc3b5aa765d61d8327deb882cf99' where id like 'admin')"
```

where *DBuser* is the SGMSDB username and *DBpassword* is the SGMSDB password.

Copying/Pasting into SonicWALL ViewPoint User Interface

The Java Plug-in version 1.3 and later does not allow applets to access user clipboards. To circumvent this, you must explicitly allow applets to access your clipboard. To do this, follow these steps:

1. Open the java.policy file with a text editor. It is usually located in the following directory:

   c:\Program Files\JavaSoft\JRE\1.3\lib\security
2. Add the following line to the top of the file after the "// "standard" properties that can be read by anyone":

   ```
   permission java.awt.AWTPermission "accessClipboard", "write";
   ```
3. Save the java.policy file and exit.

Using the Import Feature from Applet

To use the SonicWALL ViewPoint Import option from a remote browser, follow these steps:

1. Open the java.policy file with a text editor. It is usually located in the following directory:

   `c:\Program Files\JavaSoft\JRE\1.3\lib\security`

2. Add the following line to the end of the file:

```
// permission granted to all domains to use ViewPoint' Import option
grant {
permission java.io.FilePermission "<<ALL FILES>>", "read, write, delete, execute";
permission java.util.PropertyPermission "user.home", "read, write";
permission java.lang.RuntimePermission "modifyThread";
};
grant {
permission java.lang.RuntimePermission "accessClassInPackage.sun.misc";
};
```

3. Save the file and exit.

Securing Access to the ViewPoint Web Server

This section describes how to configure SonicWALL ViewPoint to run using HTTPS.

Creating a Keystore with a Valid Test Certificate

To configure SonicWALL ViewPoint to use HTTPS, you must create a keystore with a valid test certificate. To do this, follow these steps:

1. From the command-line on the SonicWALL ViewPoint Console, change to the following directory:

   sgms_directory`\jre\bin`

   where *sgms_directory* is the directory where SonicWALL ViewPoint was installed.

2. Enter the following command:

   .\keytool -genkey -alias spcert -keyalg RSA -keystore sgms_directory\etc\keystore

3. You are prompted to enter the keystore password and other information.
4. When prompted to confirm the information, type yes and press Enter.
5. Enter key password for <spcert>. If the password is the same as the keystore password, press Enter.

   The certificate is issued for evaluation and testing purposes. To create a secure website using this certificate, see "Creating a Secure Website" on page 42. To use HTTPS with a valid certificate, you will need to obtain a certificate through a valid certificate authority (e.g., Verisign and Thawte) and store the certificate in the keystore that you just created.

Note: *For information on getting a certificate from Thawte, visit http://www.orionserver.com/docs/ssl-howto.html.*

Creating a Secure Website

This section describes how to create a secure website with server side authentication. To do this, follow these steps:

1. Open the <sgms_directory>\jre\lib\security\java.security file with a text editor.
2. Locate the following entry:

   `provider.2`

3. Replace it with the following:

   `provider.3`

4. Insert the following line above the line that you just edited:

   `security.provider.2=com.sun.net.ssl.internal.ssl.Provider`

5. Save the file and exit.
6. Open the <sgms_directory>\Tomcat\conf\server.xml file with a text editor.
7. Locate the following entry:

```
<!--
<Connector className="org.apache.tomcat.service.PoolTcpConnector">
<Parameter name="handler"
value="org.apache.tomcat.service.http.HttpConnectionHandler"/>
<Parameter name="port"
value="8443"/>
<Parameter name="socketFactory"
value="org.apache.tomcat.net.SSLSocketFactory" />
</Connector>
-->
```

8. Remove the comment characters (<!--, -->).
9. Change the port value from 8443 to 443.
10. . Enter the following lines below the port entry:

```
<Parameter name="keypass" value="keystore_password"/>
<Parameter name="keystore" value="sgms_directory\etc\keystore"/>
<Parameter name="clientAuth" value="false"/>
```

where keystore_password is the keystore password that you entered when creating the certificate and sgms_directory is the directory where SonicWALL ViewPoint was installed.

The following is an example of a modified server.xml entry:

```
<Connector className="org.apache.tomcat.service.PoolTcpConnector">
<Parameter name="handler"
value="org.apache.tomcat.service.http.HttpConnectionHandler"/>
<Parameter name="port"
value="443"/>
<Parameter name="keypass" value="sgms11"/>
<Parameter name="keystore" value="D:\SGMS2\etc\keystore"/>
<Parameter name="clientAuth" value="false"/>
<Parameter name="socketFactory"
value="org.apache.tomcat.net.SSLSocketFactory" />
</Connector>
```

11. To disallow normal HTTP traffic, locate and comment out the following section:

```
<!-- Normal HTTP -->
<Connector className="org.apache.tomcat.service.PoolTcpConnector">
<Parameter name="handler"
value="org.apache.tomcat.service.http.HttpConnectionHandler"/>
<Parameter name="port" value="80"/>
</Connector>
```

When you are finished, it should look like the following:

```
<!-- Normal HTTP -->
<!--
<Connector className="org.apache.tomcat.service.PoolTcpConnector">
<Parameter name="handler"
value="org.apache.tomcat.service.http.HttpConnectionHandler"/>
<Parameter name="port" value="80"/>
</Connector>
-->
```

12. Save the file and exit.
13. Restart the ViewPoint Web Server service.

Securely Accessing SonicWALL ViewPoint

To securely access SonicWALL ViewPoint, open a web browser and enter `https://viewpoint_address` where viewpoint_address is the address of the SonicWALL ViewPoint server.

If you are using a Windows server, modify the desktop shortcut and make sure it points to `https://localhost`.

Customized Reports

The scheduled reports generated by the SonicWALL ViewPoint Scheduler service contain several elements that can be customized. These include:

- Logo at the top left corner of the report – default is SonicWALL logo
- Heading section at the top right corner of the report – default is 'SonicWALL Reporting'
- Chart and table colors
- Background colors
- Font types and size
- Displayed text

Note: *Table fonts and text can not be altered.*

Customizing Reports

To customize reports, follow these steps:

1. Create a folder to store custom report templates. The folder name cannot contain spaces and must be located in the appropriate directory. For example, to use the folder name MyCustomReports, you must create the folder with the following directory structure:

   `<gms_directory>\Tomcat\webapps\sgms\reports\scheduledreports\MyCustomReports`

2. Copy all of the files in the following directory into the newly created folder:

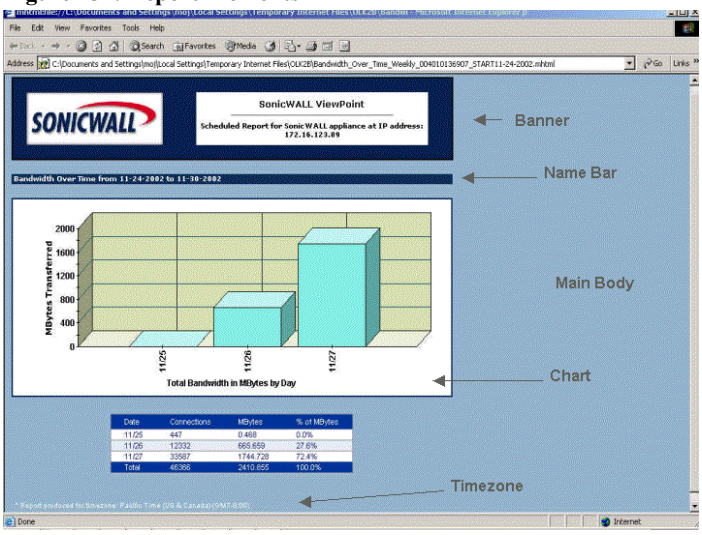
   `<gms_directory>\Tomcat\webapps\sgms\reports\scheduledreports\`

3. The default logo used in the reports is the SonicWALL logo. If you wish to use a different logo, copy it into the following directory:

   `<gms_directory>\Tomcat\webapps\sgms\images\`

4. Using Table 2 as a guideline, edit one or more of the JSP files in each subdirectory. Figure 157 shows some report elements as they are displayed.

Figure 157: Report Elements



5. Restart the SGMS Web server service.
6. Update the database. Each scheduled report is stored with a unique ID in the VP_EMAIL_RECEIVERS table in the SGMS database and each scheduled report contains an additional field, entitled "TEMPLATE_FOLDER", in the table. The TEMPLATE_FOLDER field specifies the partial folder name from where the custom templates are drawn.

   Run the following SQL commands in the QueryAnalyzer to enable one or all of the current scheduled reports in the VP_EMAIL_RECEIVERS table to pick up the custom templates from your newly created custom folder (i.e., MyCustomTemplate).

   ```
   USE SGMSDB;
   UPDATE VP_EMAIL_RECEIVERS SET TEMPLATE_FOLDER='MyCustomReports' WHERE ID='x';
   ```

   where x is the ID of the schedules report in the VP_EMAIL_RECEIVERS table. For all the current scheduled reports in the VP_EMAIL_RECEIVERS table, omit the 'WHERE ID='x'' from the UPDATE command.

   Now, all reports in the scheduled report ID x pick up the customized templates from the MyCustomTemplate folder.

   Note: *The TEMPLATE_FOLDER field must contain the full path below the scheduledreports directory. If the TEMPLATE_FOLDER field is empty, default report formats are used. The SQL commands only apply to the current scheduled reports in the database (i.e., in the VP_EMAIL_RECEIVERS table). If you create new scheduled reports from the UI or by using the CLI, you must re-execute the SQL commands for the newly created scheduled reports.*

Report File Elements

The following table contains a list of all modifyable report elements.

Note: *When modifying JSP files, you can change report values, but do not modify the parameter or file names.*

Table 2: Report File Elements

Element	Element Parameter	Default Value
Main body background color	body bgcolor	#95B5CD (light blue)
Banner background color	bgcolor	#071F4F(dark blue)
Banner border color	bordercolor	#000000 (black)
Logo image	img src	images/mainLogo2.gif
Logo image link	href	http://www.sonicwall.com
Logo image size	width and height	200 and 73, respectively
Logo image name	alt	SonicWALL Logo
Logo image background color	bgcolor	#FFFFFF (white)
Banner title		SonicWALL ViewPoint
Banner title font type	font face	Verdana, Arial, Helvetica, sans-serif
Banner title font size	font size	2
Banner title font color	font color	#000000 (black)
Banner text (unit report)		Scheduled Report for SonicWALL appliance at IP address:
Banner text (group report)		Scheduled Report for SonicWALL Group:
Banner text font type	font face	Verdana, Arial, Helvetica, sans-serif
Banner text font size	font size	1
Banner text font color	font color	#000000 (black)
Name bar background color	Bgcolor	#0C2C56
Name bar text		For example, Web Usage Top Sites By User for, Bandwidth Over Time from, Overtime from, Bandwidth Summary for
Name bar text font type	font face	Verdana, Arial, Helvetica, sans-serif
Name bar text font size	font size	1
Name bar text font color	font color	#FFFFFF (white)
Chart background color	setChartBackground	#FFFFFF (white)
Chart plot color	setPlotAreaBackground	Varies for each report
Timezone text		Report produced for timezone
Timezone text font type	font face	Arial
Timezone text font size	font size	1
Timezone text font color	font color	#FFFFFF (white)

Messages

Message Text
CONFIG—Route not available to the destination IP:
Route not available to the destination. IP
Cannot decide where to send layer 3 broadcast due to src IP
ROUTING—Layer 3 broadcast dropped due to Src IP:
CONFIG—Unknown Peer type in PDE
Unknown Peer type in PDE.
CONFIG—Manual keying for remote clients is not supported
ESP/AH manual keying for remote clients is not supported
CONFIG—Unknown protocol in PDE
Unknown protocol in PDE.
Out of BRAM space. Cannot save PDE.
SYSTEM - CAPACITY - Call Sales - BRAM capacity reached - Last policy not saved
Out of BRAM space. Cannot restore all PDE(s). Upgrade failed.
SYSTEM - CAPACITY - Revert to prior release - BRAM capacity reached - Call sales
Failed to get free frame buffer
SYSTEM - CAPACITY - Call Customer Support if message reoccurs - Frame Buffer
Out of memory
SYSTEM - CAPACITY - Memory error or capacity reached - Warm start and monitor
DRAM checksum error
SYSTEM - ERROR - Call Customer Support if message reoccurs - DRAM Checksum
Out of memory. Cannot restore all PDE(s). Upgrade failed.
SYSTEM - CAPACITY - Revert to prior release - Call Sales
Memory allocation error. ULA Host Auth. incomplete. IP:
SYSTEM - CAPACITY - Call Sales - ULA Memory
Flash write error
SYSTEM - ERROR - Call Customer Support if message reoccurs- Flash Write
Flash erase error
SYSTEM - ERROR - Call Customer Support if message reoccurs - Flash Erase
Flash checksum error
SYSTEM - ERROR - Call Customer Support if message reoccurs- Flash Checksum
Critical: Terminating Flash programming
SYSTEM - ERROR - Call Customer Support for replacement- Flash Halt

Critical: Ravlin is completely disabled.
SYSTEM - ERROR - Call Customer Support for replacement- Sys Disabled
Critical: Failed to disable Ravlin.
SYSTEM - ERROR - DISCONNECT UNIT- Call Support - Runaway System
Signature Verification failure
SYSTEM - ERROR - Call Customer Support to reset firmware - Signature
Out of NV Memory
SYSTEM - CAPACITY - Call Customer Support - Flash Capacity
Invalid NV Type
SYSTEM - ERROR - Call Customer Support if message reoccurs- Flash Type
No such NV handle
SYSTEM - ERROR - Call Customer Support if message reoccurs- Flash Handle
ISAKMP:Drop Request to send packet with length > 1520.
IKE ERROR: Drop Request to send packet with length > 1520. Peer:
ISAKMP: Drop Request to send packet with length zero.
IKE ERROR: Drop Request to send packet with length zero. Peer:
Interface 0 stopped transmitting due to an abnormal interrupt.
SYSTEM - ERROR - The DEC ethernet interface 0 stopped transmitting due to an abnormal interrupt.
CA certificate not found in list
CONFIG - PKI - Check configuration: Referenced CA certificate not loaded
CA certificate lookup hash
CONFIG - PKI - Check configuration: Reload CA certificate
Found CA certificate in CA certificate list
PKI - Success: Found CA certificate
Certificate verified - but invalid
PKI - Certificate is invalid
PKI - IDS - Verify CA signature failed
Verify CA signature failed
CONFIG - PKI - Check Policy: certificate and policy names do not match
Distinguished name in the Certificate does not match with the policy entry.
PKI - Signature Algorithm mismatch is X.509 certificate
Signature Algorithm mismatch is X.509 certificate
DSS p value:
PKI - DSS p value:
DSS q value:
PKI - DSS q value:
DSS g value:
PKI - DSS g value:
ARP - No ARP entry for destination:
No ARP entry for destination
ARP - Received Delayed ARP reply. Source:
Received Delayed ARP reply. Source:
ARP - No ARP response. Destination:
No ARP response. Destination:
ARP - Duplicate ARP response. Source:

Duplicate ARP response. Source:
Save DHCP address in NVM success.(Peer/Hostname/DHCP IP):
Save DHCP address in NVM success.(Peer:DHCP):
DHCP - Saved DHCP Record (Peer/Hostname/DHCP IP):
SYSTEM - CAPACITY - Failed DHCP save to NV (Peer/Hostname/DHCP IP)
Failed to save DHCP address in NVM. (Peer:DHCP)
DHCP - IP address received is
DHCP successful - current IP address is
DHCP - NACK received
DHCP NACK received
DHCP - Normal - Renewing
DHCP Renewing
DHCP - Normal - Rebinding
DHCP Rebinding
DHCP - Normal - Lease Expires
DHCP Lease Expires
Restarting DHCP.
SYSTEM - ERROR - Restarting DHCP.
Stop DHCP
SYSTEM - ERROR - Stop DHCP
DHCP - Housekeeping - Move to new index. (Peer:DHCP:Old:New)
Moving DHCP Address to new index. (Peer:DHCP:Old:New)
DHCP - Error - Invalid DHCP Address. (Peer:DHCP Address)
Invalid DHCP Address. (Peer:DHCP Address)
DHCP - Normal - Insert Hash table entry. (Index:DHCP Addr)
Insert Hash table entry. (Index:DHCP Addr)
DHCP - Rcvd request to release DHCP Address. (Peer:DHCP Addr)
Rcvd request to release DHCP Address. (Peer:DHCP Addr)
DHCP - Normal -Lease expired for DHCP Address. (Peer:DHCP Addr)
Lease expired for DHCP Address. (Peer:DHCP Addr)
DHCP - Normal - Received DHCP records. Peer/DHCP IP:
Received DHCP records. Peer/DHCP IP:
DHCP - Normal - Record already exists. Peer/DHCP IP:
DHCP record already exists. Peer/DHCP IP:
Delete DHCP record on passive Ravlin. Peer/DHCP IP:
DHCP - Releasing remote DHCP record due to reassignment Peer/DHCP IP:
Delete DHCP record due to unsolicited ARP. Peer/DHCP IP:
DHCP - Releasing DHCP due to reassignment Peer/DHCP IP:
DHCP – Register address for remote user (Peer/Hostname/DHCP IP):
Register DHCP Client. (Peer/Hostname/DHCPIP)
DHCP – Register address for Ravlin Soft user (Device IP/Hostname/VIP):
Register DHCP Client. (RIP/Hostname/VIP)
ICMP - Network Error - Received ICMP Unreachable from:
Received ICMP Destination unreachable
IP - IP Fragmentation Failed:

IP Fragmentation Failed:
FW - LOG - Packet passed in clear: (Src|Dst|Proto|DstPort)
VPN - LOG - TCP Session Terminated: (Src|Dst|DstPort|SrcPort)
VPN - LOG - TCP Session Initiated: (Src|Dst|DstPort|SrcPort)
FW - EVENT - No ICMP session. Pkt. dropped: (Src/Dst/Interface)
FW - EVENT - No UDP session. Pkt. dropped: (Src/Dst/DstPort/SrcPort/Intf)
FW - EVENT - No TCP session. Pkt. dropped: (Src/Dst/DstPort/SrcPort/Intf)
FW - LOG - ICMP Session Initiated: (Src|Dst)
FW - LOG - ICMP Session Terminated: (Src|Dst)
FW - LOG - UDP Session Initiated: (Src|Dst|DstPort|SrcPort|NAT)
FW - LOG - UDP Session Terminated: (Src|Dst|DstPort|SrcPort|NAT)
FW - LOG - TCP Session Initiated: (Src|Dst|DstPort|SrcPort|NAT)
FW - LOG - TCP Session Terminated: (Src|Dst|DstPort|SrcPort|NAT)
LCP Conf-Req Sent
PPP - LCP Conf-Req Sent
LCP Conf-Req Rcvd
PPP - LCP Conf-Req Rcvd
LCP Conf-Ack Sent
PPP - LCP Conf-Ack Sent
LCP Conf-Ack Rcvd
PPP - LCP Conf-Ack Rcvd
LCP Conf-Nak Sent
PPP - LCP Conf-Nak Sent
LCP Conf-Nak Rcvd
PPP - LCP Conf-Nak Rcvd
LCP Conf-Reject Sent
PPP - LCP Conf-Reject Sent
LCP Conf-Reject Rcvd
PPP - LCP Conf-Reject Rcvd
LCP Term-Req Sent
PPP - LCP Term-Req Sent
LCP Term-Req Rcvd
PPP - LCP Term-Req Rcvd
LCP Term-Ack Sent
PPP - LCP Term-Ack Sent
LCP Term-Ack Rcvd
PPP - LCP Term-Ack Rcvd
LCP Code-Reject Sent
PPP - LCP Code-Reject Sent
LCP Code-Reject Rcvd
PPP - LCP Code-Reject Rcvd
LCP Protocol-Reject Rcvd
PPP - LCP Protocol-Reject Rcvd
PAP Auth-Req Sent
PPP - PAP Auth-Req Sent

PAP Auth-Ack Rcvd
PPP - PAP Auth-Ack Rcvd
PAP Auth-Nak Rcvd
PPP - PAP Auth-Nak Rcvd
IPCP Conf-Req Sent
PPP - IPCP Conf-Req Sent
IPCP Conf-Req Rcvd
PPP - IPCP Conf-Req Rcvd
IPCP Conf-Ack Sent
PPP - IPCP Conf-Ack Sent
IPCP Conf-Ack Rcvd
PPP - IPCP Conf-Ack Rcvd
IPCP Conf-Nak Sent
PPP - IPCP Conf-Nak Sent
IPCP Conf-Nak Rcvd
PPP - IPCP Conf-Nak Rcvd
IPCP Conf-Reject Sent
PPP - IPCP Conf-Reject Sent
IPCP Conf-Reject Rcvd
PPP - IPCP Conf-Reject Rcvd
IPCP Term-Req Sent
PPP - IPCP Term-Req Sent
IPCP Term-Req Rcvd
PPP - IPCP Term-Req Rcvd
IPCP Term-Ack Sent
PPP - IPCP Term-Ack Sent
IPCP Term-Ack Rcvd
PPP - IPCP Term-Ack Rcvd
PPP - PPPoE login failed. Check username/password and try again.
PPPoE - Authentication failed. Check username/password and try again.
PPP - PPPoE Info
PPPoE Info
PPP - Received CHAP Auth request
Received CHAP Auth request
CHAP authentication sent
PPP - CHAP authentication sent
CHAP authentication success
PPP - CHAP authentication success
CHAP authentication failure
PPP - CHAP authentication failure
PADI Sent
PPPoE - Looking for Servers (PADI)
PADO Rcvd
PPPoE - Available Server (PADO)
PADR Sent

PPPoE - Selected a Server (PADR)
PADS Rcvd
PPPoE - Server Confirms Selection (PADS)
PADT Sent
PPPoE - Terminate Session Sent (PADT)
PPPoE - Discovery Complete
PPPoE Discovery Complete
PPPoE - Discovery Failed
PPPoE Discovery Failed
PPPoE - Service Name Error
PPPoE Service Name Error
PPPoE - Concentrator Error
PPPoE Concentrator Error
PPPoE - Generic TAG Error
PPPoE Generic TAG Error
PPPoE - Network Disconnected due to inactivity
PPPoE - Connection established
RADIUS - Sent Challenge - Client:
Sent RADIUS ACCESS_CHALLENGE. Client:
RADIUS - Authentication successful.
RADIUS Authentication successful.
RADIUS - Authentication failed.
RADIUS Authentication failed.
RADIUS - Access Request from Client:
Received RADIUS ACCESS_REQUEST. Client:
Drop RADIUS ACCESS_REQUEST. Bad pending SA pointer.
RADIUS - Cannot match reply to pending session
RADIUS - Received unknown attribute. Login halted Client:
Received unknown attribute. No ACCESS_CHALLENGE sent. Client:
RADIUS - Bad Checksum - Software error from:
Received RADIUS packet with bad checksum. Client:
Frame allocation error. No ACCESS_CHALLENGE sent. Client:
SYSTEM - CAPACITY - Frame allocation - N0 RADIUS Challenge sent to Client:
Inactive Session terminated.
RADIUS - Inactivity triggered - Session terminated.
Computed hash does not match received hash. Auth Server:
RADIUS - Server Configuration Error - Check shared key to:
No pending client request. Drop RADIUS frame. Client:
RADIUS - No pending client request. Drop request from Client:
RADIUS - Invalid Access Code - Potential intrusion from Client:
Received RADIUS packet with invalid ACCESS code. Client:
Bad Pending SA pointer type:
SYSTEM - ERROR - Call Customer Service - SA pointer type
Drop duplicate RADIUS ACCESS_REQUEST. Client:
RADIUS - Duplicate Request - Possible intrusion from:

RADIUS - Invalid packet - Possible intrusion from:
Received invalid RADIUS packet. Client:
Challenge response timeout. ULA Host:
RADIUS - Timeout. Ravlin Host:
Challenge response timeout. ISAKMP aborted. Client:
RADIUS - Timeout. Ravlin Soft Client:
RADIUS - Sent Request to AAA Server:
Sent RADIUS ACCESS_REQUEST. Auth. Server:
RADIUS - Received Access Rejected from AAA Server:
Received RADIUS ACCESS_REJECT. Auth. Server:
RADIUS - Received Challenge from AAA Server:
Received RADIUS ACCESS_CHALLENGE. Auth. Server:
Failed to Authenticate. Client:
RADIUS - Failed to Authenticate. Client:
Authentication server does not exist.
RADIUS - Cannot connect to Authentication Server:
Authentication server timeout.
RADIUS - AAA Server timeout.
Received SNMP packet with bad checksum from
SNMP - Possible intrusion - Checksum error in command channel from
AH/ESP Anti-Replay Update Failed: Non-Initialized or Wrapped SEQNUM
VPN FW - Anti-Replay Update Failed
AH/ESP Anti-Replay Check Failed: Last:Current SEQNUM:
VPN FW - Anti-Replay Check Failed - Sequence Number (Last:Current)
AH/ESP Tunnel Decapsulation Check Failed: Bad Inner IP or ESP Hdrs ??
VPN FW - Decapsulation Check Failed: Bad IP and/or Header
AH/ESP Anti-Replay Check Failed: SEQNUM is zero.
VPN FW - Anti-Replay Check Failed - Sequence Number is zero.
AH/ESP Authentication : HMAC Hash Verification Failed. Peer:
VPN FW - HMAC Hash Verification Failed. Peer:
CONFIG - Client VPN request- but no policy from:
No client group defined. ISAKMP cannot be initiated. Peer:
IPSEC - Normal - Session lifetime has expired for Peer:
IPSEC SA lifetime expired. Peer:
CONFIG - No policy defined for Peer
ISAKMP responder. No PDE defined for Client or server. Peer
Cannot find ISAKMP authentication preshared key
CONFIG - Cannot find preshared key
No conn entry with message ID to verify QM!:
SYSTEM - ERROR - Lost state of IPSEC rekey - will reset
ISAKMP Responder could not find gateway MAC address
SYSTEM -ERROR - IKE Could not find gateway MAC address
Bad IPSEC protocol transform
CONFIG - Bad IPSEC protocol transform
DHCP - Received request to send DHCP records from:

Received request to send DHCP records.
Internal error: client hash table has bad flag
SYSTEM - ERROR - Watch for reoccurrence - Client Table corrupted
Bad DES transform
CONFIG - IKE - Bad DES transform
CONFIG - IKE - Found inconsistent transform
ISAKMP Responder found inconsistent transforms
CONFIG – IKE - Unsupported payload type.
IPSEC - Session rekey failed
Quick Mode processing failed
IKE - SA lifetime expired with Peer:
ISAKMP SA lifetime expired. Peer:
IKE - Received Keep alive packet
IKE - Discard out of sequence packet. Peer:
CONFIG - extra proposals after AH and ESP
Internal error: extra proposals after AH and ESP
Bad IPSEC protocol values
CONFIG - IPSEC- Bad IPSEC protocol values
CONFIG - IKE proposal is not acceptable. Peer:
ISAKMP Phase I proposal is not acceptable. Peer:
CONFIG - ESP/AH proposal is not acceptable. Peer:
ISAKMP Phase II proposal is not acceptable. Peer:
IKE - Security Association requested from Peer:
Received ISAKMP initialization request. Peer:
IKE - Session created - Ready to negotiate.
Phase I complete.
IKE - Initiate Security Association with Peer:
Start ISAKMP initialization. Peer:
IKE - Unable to negotiate security association with Peer:
ISAKMP failed. Peer:
IPSEC - IKE Complete - Encrypting to Peer:
ISAKMP/OAKLEY successful. SA Active. Peer:
IPSEC - NAT Detected - OmniTraversal invoked to Peer:
IPSEC traffic will be encapsulated in UDP. Peer:
IKE - Improper packet - Aborting negotiation
No SA exists. Next payload is not S
IKE - Unable to decrypt packet
Unable to decrypt payload!
Can't get conn entry I just created!
SYSTEM - ERROR - IKE negotiation out of sync - will auto reset
CONFIG - Preshared keys between peers are different
Invalid payload. Possible overrun attack!
Main Mode processing failed
SYSTEM - ERROR - IKE Processing failed
Header verified invalid!

IKE - Incoming packet for negotiation is invalid
CONFIG - Timeout - Negotiation could not be reached
ISAKMP timeout. SA data is invalid.
IKE - Starting Session Rekey. Peer:
Start QM Rekey. Peer:
IKE - Received request to rekey session with Peer:
Received QM rekey. Peer:
IKE - Resources busy rekey delayed slightly
Start rekey later since we initiate ISAKMP one at a time.
CONFIG - Place unit in VPN mode
Recv'd an encrypted packet when crypto not active!.
Can't create conn entry!
SYSTEM - ERROR - Watch for reoccurrence - Conn Entry
CONFIG - Remote end is sending clear traffic
Recv'd an unencrypted packet when crypto active!
IKE - Negotiation failed - No answer received from Peer:
ISAKMP timeout. Retransmission failed. Peer:
IKE - Negotiation aborted - Payload verification failed.
Payload verification failed. ISAKMP aborted.
No connection entry
SYSTEM - ERROR - Check policies
SYSTEM - ERROR - Unable to encrypt packet
Unable to encrypt payload!
Can't send request after processing!
SYSTEM - ERROR - Packet invalid after processing
DHCP - “Retransmission of DHCP Records failed. Peer:
Retransmission of DHCP Records failed. Peer:
IKE - Request to delete IPSEC SA has invalid DOI
Invalid DOI in delete message!
IKE - Request to delete IKE SA invalid.
Invalid ISAKMP SA delete message.
IKE - Request to delete IPSEC SA does not match
ISAKMP SA delete msg for a different SA!
IKE - Request to delete IPSEC SA invalid
Invalid IPSEC SA delete message.
IKE - Request to delete SA has unknown protocol
Unknown protocol in delete message!
Dropped duplicate ISAKMP packet.
IKE - Duplicate IKE Packet discarded
IKE - Authentication rekey set to (seconds)
Phase I rekey.
IPSEC - Session rekey set to (seconds)
Phase II rekey.
IKE -Received ISAKMP packet with bad length. Peer:
Received ISAKMP packet with bad length. Peer:

IKE - Restart IKE after ESP decap. Peer gateway:
Restart ISAKMP after ESP decap. Peer gateway:
IKE - Received IKE SA delete request. Peer:
Received ISAKMP SA delete request. Peer:
IKE -Received IPSEC SA delete request. Peer:
Received IPSEC SA delete request. Peer:
IKE - Restart IKE after ESP decap. Peer host:
Restart ISAKMP after ESP decap. Peer host:
CONFIG - Check preshared keys.
Unable to compute shared secret.
Host:Virtual IP does not match Inner Source IP.(VIP:Src IP):
VPN FW - Decrypted Source IP does not match (Expected:Actual):
Host:Destination address does not match local protected networks.
VPN FW - Decrypted Destination IP does not match policy
Gateway:Source or destination address failed filter.(Src:Dst:Port):
VPN FW - Received packet does not match policy (Src:Dst:Intf):
ULA enabled PDE. Drop Pkt as host is not Authenticated. IP:
VPN FW - Policy requires host authentication by RADIUS IP:
CONFIG - RADIUS is not enabled. Dropping IP:
ULA enabled PDE. Drop Pkt as RADIUS is not enabled. IP:
CONFIG - Only 1 PDE can have Peer Net set to all zero
Found more than one Gateway PDE with peer networks set to all zero.
Drop ISAKMP frame from Local Side
VPN FW - IKE received on local interface - Check cabling
CONFIG - Remote network appears in more than 1 PDE (Src/Dst/Net/Mask)
Destination matches to multiple peer networks on Gateway PDE (Src/Dst/Net/Mask)
Drop ESP due to bad checksum in IP
NETWORK - Incoming ESP packet has bad checksum
Local interface. Source address failed filter.(Src:Dst):
VPN FW - Local interface reports invalid source IP (Src:Dst):
Remote interface. Source address failed filter.(Src:Dst):
VPN FW - Remote interface reports invalid source IP (Src:Dst):
Unsupported protocol. (SrcIP/DstIP/Protocol/Port/Interface):
VPN FW - No session for (SrcIP/DstIP/Protocol/Port/Intf):
Failed to build SA. Block connection. Peer:
VPN FW - Block VPN Connection. Peer:
Drop ESP or AH. Multiple server entries. ISAKMP aborted. Peer:
SYSTEM - ERROR - Multiple server entries. IKE aborted. Peer:
Drop ISAKMP frame on remote port in non-operational mode. Peer:
SYSTEM - ERROR - Drop IKE frame from/to Peer:
ISAKMP race condition found. Peer:
SYSTEM - ERROR - ISAKMP race condition found. Peer:
SYSTEM - ERROR - Check Policy - decryption halted
Unknown crypto algorithm. Payload not decrypted
SYSTEM - ERROR - Check Policy - encryption halted

Unknown crypto algorithm. Payload not encrypted
Mismatch Protocol/Port Check
SYSTEM - ERROR - Mismatch Protocol/Intf Check
Bad SPI in Packet (SrcIP/Status/SPI1/SPI22/InSPI):
IPSEC - Bad SPI in Packet (SrcIP/LocalSPI/InSPI):
Internal error: Bad SA type.
SYSTEM - ERROR - Call customer service - - Bad SA Type
Failed to start ISAKM phase I rekey. Invalid SA.
SYSTEM - ERROR - Call customer service if frequent - IKE Rekey aborted.
Could not find the IPSEC SA to remove.
IPSEC - SA to terminate can not be found.
Client SA Terminated.
IPSEC - Client SA Terminated.
Memory allocation error. ISAKMP aborted. Peer:
SYSTEM - CAPACITY - Call Sales - IKE Memory Peer:
CONFIG - IKE - Unknown Protocol to negotiate. Peer:
Unknown protocol to negotiate. ISAKMP aborted. Peer:
IPSEC - Cannot match OmniTraversal Packet to active SA - Peer:
Received ESPThruUDP packet outside an SA. Peer:
CONFIG - IKE - Unknown authentication method! ISAKMP aborted.
Unknown authentication method!. ISAKMP aborted.
CONFIG - IKE - Unknown crypto-algorithm
Unknown crypto-algorithm. ISAKMP aborted.
Internal error: Multiple PDE's for same Peer exceeded limit.
SYSTEM - ERROR - Multiple PDE's for same Peer exceeded limit.
AUDIT - Publisher registered for event audit messages
Publisher registered for event audit messages
AUDIT - Deallocation of event publisher context failed.
Deallocation of event publisher context failed.
AUDIT - Event publisher deregistered.
Event publisher deregistered.
AUDIT - Publisher deregistration failed.
Publisher deregistration failed.
Random Number Generator Fault
SYSTEM - POST - Random Number Generator Fault
SYSTEM - POST - All subsystems test OK - System Ready
SYSTEM - POST - Ethernet test failed
SYSTEM - POST - Crypto test failed
SYSTEM - POST - BRAM test failed
SYSTEM - POST - UART test failed
SYSTEM - POST - Real Time Clock test failed
SYSTEM - POST - Ethernet initialization failed
SYSTEM - POST - Out of memory
SYSTEM - POST - Critical: BRAM version unrecognized
SYSTEM - POST - Receive buffer unavailable on local interface

SYSTEM - POST - Receive buffer unavailable on remote interface
SYSTEM - POST - No frames available for local interface (GetFrame() failed)
SYSTEM - POST - No frames available for remote interface (GetFrame() failed)
SYSTEM - POST - Interface 0 stopped transmitting due to an abnormal interrupt.
SYSTEM - POST - Interface 1 stopped transmitting due to an abnormal interrupt.
Tunnel Status:
VPN - Performance for:(PDE: Sent-Rcvd-Lost Min-Max-Avg)